THE U.S. ARMY CORPS OF ENGINEERS RESPONSE TO REQUESTS FOR SCIENTIFIC STUDY – KENNEWICK MAN HUMAN REMAINS

1. BACKGROUND

Human remains that have come to be referred to as the Kennewick Man, or the Ancient One, were found in July, 1996 below the surface of Lake Wallula, a pooled part of the Columbia River behind McNary Dam, federal land under the management authority of the U.S. Army Corps of Engineers. Upon discovery, the coroner and local police were notified. At the request of the county coroner, a local anthropologist, Dr. James Chatters, examined a cranium removed from the site and performed a site visit at the location of the discovery. After concluding that the skeleton was not of recent origin, Dr. Chatters contacted the Army Corps of Engineers and was subsequently issued a permit under the Archaeological Resources and Protection Act (ARPA), 16 U.S.C. §§ 470aa-470mm, to collect the human skeletal remains from the discovery site. Dr. Chatters subsequently initiated a series of tests on the human remains. Radiocarbon test results received by Dr. Chatters in late August 1996 indicated that these human remains were between 9,200 and 9,600 years old.

Because the remains were found on federal property under the control of the Walla Walla District of the U.S. Army Corps of Engineers (Corps), the Benton County coroner subsequently delivered the human remains to the Walla Walla District on September 5, 1996. The remains were delivered to the Corps at the Pacific Northwest National Laboratory, a facility managed by the Battelle Corporation and under contract with the Corps for curation services. In October 1998 the remains were moved to the Thomas Burke Memorial Washington State Museum in Seattle, Washington where the remains have been curated to the present time. The Board of Regents of the University of Washington manages the Burke Museum.

Soon after the remains were returned to the Corps, the Corps published notices of its intent to repatriate these human remains pursuant to the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. §§ 3001-3013, to five Columbia River basin tribes and bands. These notices were published on 17 and 24 September 1996 in the Tri-City Herald, Kennewick, Washington. The Corps' notices of intent to repatriate were based in part upon findings that the remains had been inadvertently discovered on federal land recognized in claims litigation as the aboriginal land of an Indian tribe and that there existed a shared group identity which could be reasonably traced between the human remains and the five Columbia River basin tribes and bands to whom the Corps intended to repatriate the remains.

2. KENNEWICK MAN LEGAL PROCEEDINGS

Following publication of the notice of intent to repatriate, several scientists notified the Corps of their objections regarding the proposed decision to repatriate the remains. The scientists believed that the remains represented a "rare discovery of national and international significance" that should be subject to examination and study. Following these notifications, a group of scientist filed suit on October 16, 1996 in the United States

District Court for the District of Oregon seeking a temporary restraining order to halt the repatriation and the opportunity to subject the remains to detailed scientific study, Bonnichsen, et al. v. United States, et al., (D. Oregon, Civil No. 96-1516-JE). A second suit was also filed in the same court on October 22, 1996, by members of the Asatru Folk Assembly, who characterized themselves as a legally-recognized church "that represents Asatru, one of the major indigenous, pre-Christian, European religions." The Asatru plaintiffs also sought to set aside the decision of the Corps to repatriate the remains and to compel the Corps to allow scientific testing, Asatru et al., v. United States, et al., (D. Oregon, Civil No. 96-1516-JE). If the testing indicated that the remains were European, the Asatru plaintiffs also requested custody of the remains for reinterment in accordance with native European beliefs.

On March 23, 1997, the Corps rescinded the notices of intent to repatriate. The Corps' rescission was based upon a determination that there were no Indian Claims Commission (ICC) final judgments establishing these lands as aboriginal lands of any particular tribe. As indicated previously, the original notices of intent to repatriate had been issued by the Corps based in part upon findings that the place of discovery was recognized under claims litigation as the aboriginal land of an Indian tribe.

Remand to the Corps of Engineers For Further Consideration.

In an order and opinion filed on June 27, 1997, the United States District Court for the District of Oregon vacated the Corps' decision to repatriate the skeleton to the extent that the Corps had not already withdrawn that decision. The Court then remanded the matter to the Corps for further consideration. Bonnichsen et al., v. United States et al., 969 F.Supp. 628 (D. Or. 1997).

The Court's order and opinion set out a series of issues that the Corps should consider in reaching its decisions on disposition of the remains and on whether to grant plaintiffs' requests for permission to study the remains. Bonnichsen, 969 F.Supp. at 651-654. These issues were primarily related to the application and interpretation of NAGPRA but also included whether plaintiffs have a right under the First Amendment to study the remains.

The Districts Court's June 27 Opinion questioned whether there was any merit to plaintiffs' equal protection arguments but did not rule on these claims. Bonnichsen, 969 F.Supp. at 648-651. As it is unclear whether an administrative agency has the authority to decide the constitutionality of a statute, the Court did not require the Corps to consider plaintiffs' equal protection claims on remand. Id. at 649. The Court did, however, direct plaintiffs to "present to the agency all arguments that plaintiffs intend to assert in this case, and to make any record below that is needed to support those contentions." Id. at 651. On remand, the plaintiffs did not submit any additional arguments to the agency regarding their equal protection claims. In these circumstances, and consistent with the District Court's order, the agency does not now address plaintiffs' equal protection claim.

In addition to providing specific remand instructions to the agency, the Court stayed the litigation pending completion of the administrative proceedings. The Court retained jurisdiction of the case to ensure protection of the remains, and the parties' respective

interests concerning the remains, and to address any problems that might arise on remand. The court required quarterly status reports beginning on October 1, 1997. The plaintiffs' motions to study the remains while the action was pending were denied without prejudice. The government was prohibited from disposing of the remains pending resolution of the case and was required to store the remains in a manner that preserves their potential scientific value.

With respect to the issues raised by the Court in its remand order dated June 27, 1997, and in response to correspondence from the Corps dated August 5, 1997, the National Park Service, on December 23, 1997, provided the Corps with their responses to the NAGPRA-related issues that had been raised by the Court (Attachment 1).

By order dated September 21, 1999, the Court ordered the federal defendants to respond to the plaintiffs' study request by March 24, 2000. In an order of the Court dated March 8, 2000, this date was extended until September 24, 2000 to allow additional time for DNA testing of the remains.

3. INTERAGENCY AGREEMENT BETWEEN THE DEPARTMENT OF THE ARMY AND THE DEPARTMENT OF THE INTERIOR

An Interagency Agreement between the Department of the Army and the Department of the Interior was entered into in March 1998. This agreement delegated responsibilities under Section 3(d)(3) of NAGPRA. Section 3(d)(3) generally provides that a federal agency having management authority with respect to Federal lands upon which Native American cultural items are found may delegate, upon certain conditions, to the Secretary of the Interior, in whole or in part, its responsibilities regarding inadvertent discoveries, 25 U.S.C. § 3003(d)(3). The responsibilities so delegated under the March 1998 interagency agreement included, determining whether the human remains found near Kennewick, Washington, are Native American within the meaning of NAGPRA, and, if it is determined that such human remains are Native American, to provide for their disposition under the terms of the statute and its implementing regulations (Attachment 2).

Determination of Native American by the Department of Interior

Pursuant to the interagency agreement between the Department of the Army and the Department of the Interior, and as a result of a series of studies carried out by the Department of the Interior in cooperation with the Department of the Army under the terms of the interagency agreement, the Department of the Interior issued its determination on January 13, 2000 that the Kennewick human skeletal remains are "Native American" for the purposes of NAGPRA. (Attachment 3, Enclosure 1).

As indicated in the Department of the Interior (DOI) decision dated January 13, 2000, radiocarbon testing provided the chronological information needed to make the determination that the Kennewick skeletal remains are Native American as defined by NAGPRA. This determination was also supported by results of the earlier documentation, examination, and analysis of the remains themselves, sediment analysis comparing the sediment of the bones with sediment from the soil profile near where they

were recovered, analysis of the lithic point embedded in the left ileum of the remains, and geomorphic studies near the discovery site (Attachment 3, Enclosure 1 at p. 5).

Determination of Cultural Affiliation by the Department of the Interior

Subsequent to the DOI determination that the skeletal remains are Native American, the Department of the Interior, in coordination with the Department of the Army under the terms of the interagency agreement, developed cultural affiliation study protocols, identified experts to perform and review these studies, and initiated a process to carry out DNA analysis. DOI has now completed their cultural affiliation studies which focused on four areas: (1) archeology (2) biology (3) history and (4) ethnography and linguistics. In addition, DNA testing and analysis of bone samples from the remains was conducted at three independent laboratories. None of the laboratories were able to successfully extract and amplify DNA from these human remains.

By correspondence dated September 21, 2000, the Secretary of the Department of the Interior forwarded DOI's final determination and resolution of the issues delegated to them by the Department of the Army in the March 1998 interagency agreement (see Enclosure 3). In their determination, DOI found that "After considering and weighing the totality of the circumstances and evidence, DOI has determined that the evidence of cultural continuity is sufficient to show by a preponderance of the evidence that the Kennewick remains are culturally affiliated with the present-day Indian tribe claimants." In addition to a claim based upon cultural affiliation, DOI also determined that a claim based upon aboriginal occupation provides an additional basis for disposition of the Kennewick remains to the claimant Indian Tribes (Attachment 3 at p. 6).

As indicated in the letter from the Secretary of the Department of the Interior to the Secretary of the Department of the Army, five Indian tribes have submitted a joint claim under NAGPRA for custody of the Kennewick human remains. These tribes are: the Confederated Tribes of the Colville Reservation, Confederated Tribes of the Umatilla Reservation, Confederated Tribes and Bands of the Yakama Indian Nation of the Yakama Reservation, the Nez Perce Tribe of Idaho, and the Wanapum Band, a non-Federally recognized Indian group (see discussion, Attachment 3 at pp. 4-5).

Determination of Disposition by the Department of the Interior

Based upon their extensive cultural affiliation studies and their review of the history of the Indian Claims Commission findings, DOI has determined that the proper disposition of the Kennewick remains based upon cultural affiliation and aboriginal occupation is to the five claimant tribes (Attachment 3 at p. 7).

4. THE BONNICHSEN AND ASATRU STUDY REQUESTS

As indicated previously, the Court ordered the Corps to respond to the plaintiffs' study request by March 24, 2000. This date was subsequently extended by order of the Court

dated March 8, 2000, until September 24, 2000, to allow additional time for DNA testing of the remains.

Correspondence between the parties to the ongoing litigation attempted to more specifically define the areas of study. This included a letter dated February 24, 2000 from the U.S. Department of Justice, the Bonnichsen plaintiffs' response thereto dated February 28, 2000, and a reply to this letter by the U.S. Department of Justice dated March 8, 2000 (Attachments 4-6). A brief summary of this correspondence is provided below.

By correspondence dated February 24, 2000, Department of Justice requested that the Bonnichsen plaintiffs review the documents identified therein and indicate whether this correctly described their study request. The documents referenced in the letter identified letters to the Corps dated September 24 and 26, 1996, a copy of a teleconference between plaintiffs and the Corps of Engineers, as well as details provided in plaintiffs' Motion For Order Granting Access To Study, filed with the Court on March 11, 1997, which set forth twelve (12) categorical areas of scientific study of the remains. These areas are as follows: morphological measurements (skeleton); taphonomic observations (skeleton); morphometric measurements (dental); imaging (dental); molds (dental); molds (cranium); imaging (skeleton); phgytolith recovery (dental); radiocarbon dating; isotope analysis; DNA analysis; and histology.

Plaintiffs, in their response dated February 28, 2000, indicated that the "study requests are not as circumscribed as outlined in your letter of February 24, 2000. They include all correspondence between the plaintiffs and the government, the teleconference, and all pleadings and other documents filed in this litigation." By reply correspondence dated March 8, 2000, Department of Justice notified the Bonnichsen plaintiffs that until the agency received an official request to study or the additional information requested, "we will continue to assume that the basis of your request to study is contained in the March 11, 1997 filing." No additional information has been received by the agency from the Bonnichsen plaintiffs regarding their request to study. With respect to plaintiffs' study requests, the Department of the Interior has provided the Corps with detailed notes comparing the research undertaken and completed as part of the government's investigation of the Kennewick remains and the discovery site with the research proposed by the Bonnichsen plaintiffs (Attachment 7).

In addition to the requests to study by the Bonnichsen plaintiffs, the Asatru plaintiffs, as noted by the District Court, have also sought study of the remains, See Opinion at p. 4. The only specific study request made by the Asatru plaintiffs was for DNA testing, which has been conducted.

Corps' Response to Bonnichsen and Asatru Plaintiffs' Request for Study

As indicated above the Department of the Interior's National Park Service has, by correspondence dated December 23, 1997, provided guidance to the Corps concerning the questions previously posed by the Court. As noted by the National Park Service,

Congress directed the Secretary of the Interior to implement most aspects of NAGPRA, including the promulgation of implementing regulations, see 25 U.S.C. Section 3011. The Secretary of the Interior has delegated programmatic implementation of the statute to the National Park Service. Under these circumstances, it is highly appropriate that the National Park Service respond to those questions by the Court, which relate to NAGPRA and the ultimate disposition of Native American human remains.

As stated in the guidance provided by the National Park Service, a finding of cultural affiliation precludes study of Native American remains, "…if ownership and control of the human remains or cultural items is determined under NAGPRA to be with an individual or Indian tribe, no further study of such materials may be conducted without the consent of that individual or Indian tribe." (See Attachment 1 at p. 6) DOI's determination of disposition dated September 21, 2000 pursuant to the March 1998 interagency agreement is consistent with this guidance. "This determination of disposition to the claimant Indian tribes under NAGPRA precludes any study of the remains by the public. Once a disposition decision has been made, NAGPRA does not permit further study prior to the transfer of the remains to the claimants. The claimants have been found to be the legal custodians of the remains and study may only be conducted with their permission." (See Attachment 3 at p. 7)

Views of the Department of Justice Regarding Plaintiffs' First Amendment Claims Concerning their Right to Study the Kennewick Man Remains

As previously indicated, in its remand opinion dated June 27, 1997, the District Court requested that the Corps, in reaching its decisions on the ultimate disposition of the remains and on whether to grant plaintiffs' request for permission to study the remains, consider a series of questions posed by the Court, see Opinion at p. 45. Included in those questions was whether the plaintiffs have a right under the First Amendment to the United States Constitution to study the Kennewick Man human remains. The National Park Service in their response to the Court's question did not address this issue. Because of the emphasis placed by the Court on a response to this concern and in light of the expertise of the U.S. Department of Justice among the federal agencies in the area of constitutional law, the Corps has sought the advice and assistance of that agency with respect to this concern of the Court (Attachment 8).

The Department of Justice by correspondence dated September 19, 2000, has provided the Corps with guidance regarding the First Amendment and any right of the plaintiffs to study the Kennewick Man remains (Enclosure 9). This guidance indicates the Department of Justice can discern no legal basis for plaintiffs' assertion that they have a First Amendment right to study human remains in the custody of the United States pending a determination of ownership under NAGPRA. The guidance from the Department of Justice does indicate that the government may appropriately allow such access through legislation. While Congress has extensively legislated in this area, there is no statute that allows such study (see Attachment 9, enclosure at p. 8).

Corps Determination Regarding Plaintiffs' Study Request

The Department of the Interior pursuant to the delegation between the Department of the Army and the Department of the Interior has determined that under NAGPRA the proper disposition of the Kennewick remains is to the claimant tribes. The Department of Justice has also provided guidance to the Corps, which provides that there is no First Amendment right to study these remains. Based upon the determinations by the Department of the Interior and the guidance and advice provided by the Department of Justice, the requests by the Bonnichsen and Asatru plaintiffs to study the Kennewick remains are denied.

5. TRANSFER OF CUSTODY OF THE REMAINS

Pending resolution of the instant lawsuit, the Corps, in accordance with the Court's June 27, 1997 Order, will retain custody of the remains and will continue to curate the remains in a manner that preserves their scientific value. Once legally permitted to do so, the Corps will follow the regulatory procedures set forth at 43 C.F.R. § 10.6(c) for transferring the remains to the claimant tribes. These procedures include publishing general notices of the proposed disposition for the required time periods and respecting traditional customs of the claimant tribes when transferring custody. 43 C.F.R. § 10.6(c).

Encls

CARL A. STROCK
Brigadier General, USA
Commanding

22 SEP 2000

LIST OF ATTACHMENTS

1. National Park Service Letter dated 23 December 1997 to Donald J. Curis, Jr.

2. Interagency Agreement Between the Department of the Army and the Department of the Interior dated 24 March 1998

3. Secretary of the Interior Letter to Secretary of the Army dated September 21, 2000 with four (4) Enclosures
   Enclosure 1 – Native American Determination dated January 11, 2000
   Enclosure 2 – Comparison List
   Enclosure 3 - Cultural Affiliation Document
   Enclosure 4 – Opinion Regarding ICC Decisions

4. U.S. Department of Justice Letter dated February 24, 2000 to Alan L. Schneider

5. Paula A. Barran Letter dated February 28, 2000 to Allison Rumsey

6. U.S. Department of Justice Letter dated March 8, 2000 to Alan L. Schneider and Paula Barran

7. Department of Interior Fax/Memo dated September 19, 2000, Subject: Additional Information Comparing Research Completed with Proposed

8. Corps of Engineer Letter to the Department of Justice dated September 14, 2000.

9. Department of Justice Letter to the Corps of Engineers dated September 19, 2000 with Enclosure

ATTACHMENT 1

United States Department of the Interior

NATIONAL PARK SERVICE
P.O. Box 37127
Washington, D.C. 20013-7127

IN REPLY REFER TO:
W48(2275)

DEC 23 1997

Donald Curtis, Jr.
United States Army
Corps of Engineers-Walla Walla District
201 North Third Avenue
Walla Walla, Washington 99362-1976

Dear Lieutenant Colonel Curtis:

This responds to your August 5, 1997 letter requesting our views on certain matters related to the Native American Graves Protection and Repatriation Act (NAGPRA).

On June 27, 1997, United States Magistrate John Jelderks issued an opinion in connection with the consolidated cases of Bonnichsen, et al. v. United States, et al., (D. Oregon, Civil No. 96-1481-JE), and Asatru et al. v. United States, et al., (D. Oregon, Civil No. 96-1516-JE). The court directed the Corps of Engineers to consider a number of issues related to NAGPRA and the ultimate disposition of human remains recently discovered on lands owned by the Corps of Engineers within the State of Washington.

Many of the issues raised by the court are directly related to terms and procedures of NAGPRA (25 U.S.C. 3001 et seq.) and its implementing regulations (43 CFR 10). Congress directed the Secretary of the Interior to implement most aspects of the statute, including promulgation of its implementing regulations (25 U.S.C. 3011). The Secretary of the Interior has delegated responsibility for programmatic implementation of the statute to this office. In preparing the responses to your questions, I have consulted the Solicitor of the Department of the Interior. He shares the views expressed in this letter.

We have the following responses to the questions posed by your letter which, in certain instances, have been rephrased or reorganized for purposes of clarity:[1]

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[1] For the sake of clarity, our responses refer to Native American human remains and cultural items as separate categories of materials. Under NAGPRA, however, human remains and the several types of cultural items it describes (funerary objects, sacred objects, and objects of cultural patrimony) are referred to collectively as cultural items (25 U.S.C. 3001 (3)). In addition, although NAGPRA applies equally to Indian tribes and Native Hawaiian organizations, this memorandum does not make reference to Native Hawaiian organizations except where necessary for substantive reasons.

1. Whether these human remains are subject to NAGPRA, and why (or why not)?

At this time, this office does not have sufficient information to determine whether these remains are subject to NAGPRA. However, we consider that a Federal agency or museum has an obligation under NAGPRA to make reasonable efforts to determine whether human remains it possesses are Native American within the meaning of NAGPRA if there is a reason to consider this may be the case.

We are able to advise on the matters that should be considered in making this decision. Two questions should be addressed in this regard:

A. Were the remains discovered or excavated from Federal or tribal lands after November 16, 1990? (43 CFR 10.2 (f)(1)). We understand this to be the case. Section 3 of NAGPRA (25 U.S.C. 3002; "section 3") governs the ownership or control of Native American human remains or cultural items which are excavated or discovered on Federal or tribal lands after November 16, 1990.

B Are the remains of a person of Native American ancestry? (43 CFR 10.2 (d)(1)). At this time, this office does not have sufficient information to determine whether the remains are Native American within the meaning of NAGPRA.

If the answer to both questions is yes, the remains are subject to NAGPRA and their recovery, documentation, and disposition is to be carried out under NAGPRA's implementing regulations, particularly 43 CFR 10.3 through 10.7.

2. What is meant by the terms "Native American" and "indigenous" in the context of NAGPRA and the facts of this case?

We consider that the term "Native American" as used in NAGPRA applies to human remains and cultural items relating to tribes, peoples, or cultures that resided within the area now encompassed by the United States prior to the historically documented arrival of European explorers, irrespective of when a particular group may have begun to reside in this area, and, irrespective of whether some or all of these groups were or were not culturally affiliated or biologically related to present-day Indian tribes. Cultural affiliation or biological relationship, however, as discussed below, are relevant to disposition of Native American human remains and cultural items under NAGPRA.

We base these views primarily on the statutory definition of the term "Native American," which is defined in 25 U.S.C. 3001 (9), and in the NAGPRA implementing regulations at 43 CFR 10.2 (d) as meaning "of, or relating to, a tribe, people, or culture that is indigenous to the United States, including Alaska and Hawaii." We consider this definition clear and self-explanatory. We also note that NAGPRA's legislative history contains no express amplification or clarification of the term.

The court in this matter, however, indicated in its opinion that there may be an issue as to the meaning of the term "Native American" because of the word "indigenous" contained in this definition.[2]

Particularly, the court queries in footnote 24 whether the term "Native American" as defined in NAGPRA may be limited by the word "indigenous" to not include tribes, peoples, or cultures that "descended from immigrants who came to the Americas from other continents."

In our view, however, it is implausible to consider that Congress intended for the word "indigenous" to limit the term "Native American" in this manner. Rather, we consider that the term "Native American" is clearly intended by NAGPRA to encompass all tribes, peoples, and cultures that were residents of the lands comprising the United States prior to historically-documented European exploration of these lands.

In this connection, there are differences of opinion as to the origins of at least some present-day Indian tribes with respect to whether or not they are descended from peoples which immigrated to the lands now comprising the United States. (See the discussion in footnote 24 of the court's opinion.)

However, we point out that NAGPRA repeatedly applies the term "Native American" to human remains and cultural items affiliated with Native Hawaiians. For example, the statute states as follows in pertinent part:

> The original acquisition of Native American human remains and associated funerary objects which were excavated, exhumed, or otherwise obtained with full knowledge and consent of the next of kin or the official governing body of the appropriate culturally affiliated Indian tribe or Native Hawaiian organization is deemed to give right of possession to those remains (25 U.S.C. 3001 (13), emphasis added).

As such, Native Hawaiian human remains and cultural items fall within NAGPRA's definition of "Native American," and, accordingly, Native Hawaiians are "indigenous" to the United States as that term is used in NAGPRA. However, both historical documentation and Native Hawaiian tradition consider that Native Hawaiians migrated to the Hawaiian Islands, probably arriving some time between 200 B.C. and A.D. 800.[3] Native Hawaiians are not "indigenous" to lands of the United States if that term is construed to exclude peoples which descended from immigrants.

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[2] The court in footnote 24 of its opinion queries whether Congress may have intended a dictionary definition of "indigenous," i.e., "occurring or living naturally in an area; not introduced; native." American Heritage Dictionary of the English Language (New College Edition).

[3] See for example David H. Tuggle's "Hawaii" in The Prehistory of Polynesia (Harvard University Press, 1979, pages 167-199) and Patrick Vinton Kirch's The Evolution of Polynesian Chiefdoms (Cambridge University Press, 1984, pages 243-262).

Congressional understanding of the term "indigenous" as used in NAGPRA also can be found in several other statutes. The Native Hawaiian Education Act of 1994 (20 U.S.C. 7902), states as follows in pertinent part:

(1) Native Hawaiians are a distinct and unique indigenous people with a historical continuity to the original inhabitants of the Hawaiian archipelago, whose society was organized as a nation and internationally recognized as such by the United States, Britain, France, and Japan, as evidences by treaties governing friendship, commerce, and navigation.

(2) At the time of the arrival of the first non-indigenous people in Hawaii in 1778, the Native Hawaiian people lived in a highly organized subsistence social system based on a communal land tenure system with a sophisticated language, culture, and religion (20 U.S.C. 7902, emphasis added.)[4]

These related statutory uses of the term "indigenous" provide a clear basis for our conclusion that the term as used in NAGPRA applies to all tribes, peoples and cultures that occupied the United States prior to historically documented European exploration and that the term cannot properly be construed as to exclude descendants of immigrant peoples. Such an anomalous construction would frustrate the fundamental purposes of NAGPRA with respect to Native Hawaiians and perhaps with respect to some or all Indian tribes.

Please note that, as discussed fully in the response to question 13 below, Native American human remains or cultural items that are not claimed by a lineal descendant or qualified present-day Indian tribe pursuant to section 3 (a) are to be disposed of in accordance with regulations promulgated by the Secretary of the Interior pursuant to section 3 (b).

3. **Does, if there was more than one wave of ancient migration to the Americas, or if there were sub-populations of early Americans, NAGPRA apply to human remains or cultural items from a population that failed to survive and is not directly related to modern Native Americans?**

Yes. The statute and regulations by their own terms apply to Native American human remains or cultural items which otherwise fall within the scope of NAGPRA. There is nothing in the statute or its implementing regulations which states or implies that NAGPRA's applicability is limited to Native American human remains and cultural items which are directly related to present-day Indian tribes. However, the matter of a direct relationship with present-day Indian tribes is of concern with respect to disposition of Native American human remains and cultural items pursuant to NAGPRA.

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[4] This use of the term "indigenous" is also found in the Native Hawaiian Health Care Act (42 U.S.C. 1170 et seq.).

In this regard, under section 3 (a) of NAGPRA (25 U.S.C. 3002 (a)), the disposition of Native American human remains and cultural items which are excavated or discovered on Federal or tribal lands after November 16, 1990 is, with priority given in the order listed:

(1) in the case of human remains and associated funerary objects, in the lineal descendant of the Native American, or

(2) in any case in which such lineal descendant cannot be ascertained, and in the case of unassociated funerary objects, sacred objects, and objects of cultural patrimony—

(A) in the Indian tribe or Native Hawaiian organization on whose tribal land such objects or remains were discovered;

(B) in the Indian tribe or Native Hawaiian organization which has the closest cultural affiliation with such remains or objects and which, upon notice, states a claim for such remains or objects; or

(C) if the cultural affiliation of the objects cannot be reasonably ascertained and if the objects were discovered on Federal land that is recognized by a final judgment of the Indian Claims Commission or the United States Court of Claims as the aboriginal land of some Indian tribe –

(1) in the Indian tribe that is recognized as aboriginally occupying the area in which the objects were discovered, if upon notice such tribe states a claim for such remains or objects, or

(2) if it can be shown by a preponderance of the evidence that a different tribe has a stronger cultural relationship with the remains or objects than the tribe or organization specified in paragraph (1), in the Indian tribe that has the strongest demonstrated relationship, if upon notice, such tribe states a claim for such remains or objects.

Some of these categories require the establishment of cultural affiliation or a biological relationship. However, section 3 (a)(2)(A) Indian tribe claims to human remains and cultural items found on tribal lands and section 3 (a)(2)(C)(1) Indian tribe claims to human remains and cultural items found on Federal land that is recognized by a final judgment of the Indian Claims Commission or the United States Court of Claims as the aboriginal land of a present-day Indian tribe do not require either a cultural or biological relationship between the claimant Indian tribe and the claimed human remains or cultural items.

4. Does NAGPRA require (either expressly or implicitly) a biological connection between human remains and a contemporary Indian tribe?

No. As discussed above, NAGPRA and its implementing regulations by their own terms apply to all Native American human remains and cultural items which otherwise fall within the scope of NAGPRA, whether or not they have a direct relationship to a present-day Indian tribe.

However, as is made clear by section 3 (a), a biological relationship may be a factor in determining disposition of Native American human remains and cultural items. This, of course, particularly may be true in circumstances regarding a section 3 (a)(1) claim based on lineal descent. However, a biological connection may also be a factor, but not the only factor, to be taken into account in determining the cultural affiliation of Native American human remains and cultural items with a present-day Indian tribe for purposes of Indian tribe rights of ownership based on cultural affiliation.

43 CFR 10.14 (e) states as follows with respect to evidence that may be considered with respect to determining cultural affiliation for purposes of disposition of Native American human remains and cultural items under NAGPRA:

(e) Evidence. Evidence of a kin or cultural affiliation between a present-day individual, Indian tribe, or Native Hawaiian organization and human remains, funerary objects, sacred objects, or objects of cultural patrimony must be established by using the following types of evidence: Geographical, kinship, biological, archeological, anthropological, linguistic, folklore, oral tradition, historical, or other relevant information or expert opinion.

5. Does there have to be any cultural affiliation between these human remains and a present-day Indian tribe for purposes of NAGPRA -- and if yes, how is that affiliation established if no cultural objects are found with the remains?

For the reasons discussed above in regard to biological connections, the right to ownership and control of Native American human remains and cultural items under section 3 (a) does not necessarily require a cultural affiliation between Native American human remains and cultural items and the Indian tribe with a right to ownership to such materials.

A determination of cultural affiliation of human remains does not require the presence of cultural objects found with the remains. 43 CFR 10.14 describes the process for determining cultural affiliation. As set forth in the response to the preceding question, many types of evidence may be considered in this regard. The determination, ultimately, should be based upon an overall evaluation of the totality of the circumstances and evidence pertaining to the cultural connection between an individual or Indian tribe and the material being claimed and should not be precluded solely because of some gaps in the record (43 CFR 10.14 (d)).

6. What level of certainty is required to establish cultural affiliation between human remains and a present-day Indian tribe for purposes of NAGPRA?

Cultural affiliation between a present-day Indian tribe and Native American human remains and cultural items must be established by a preponderance of the evidence. Scientific certainty is not required (43 CFR 10.14 (f)).

7a. Are scientific studies needed prior to determining whether these human remains are subject to NAGPRA?

The statute only applies to Native American human remains and cultural items. If there is a concern as to whether the human remains in question are Native American within the meaning of NAGPRA and scientific study is necessary to resolve the issue, appropriate scientific studies should be conducted.

At this time, this office does not have enough information about the particular human remains in question to provide specific advice about the necessity for further scientific study to determine whether they are Native American.

b. Are such studies legally permissible?

Yes. Nothing in NAGPRA, its implementing regulations or other Federal law precludes analysis of human remains or cultural items excavated or discovered on Federal or tribal land after November 16, 1990, for the purpose of determining whether the remains or items are Native American within the meaning of NAGPRA, and, if so, for the purposes of determining their disposition under NAGPRA. However, certain conditions may apply to the conduct of such studies, e.g., if additional archeological work is to be undertaken on Federal lands, the Archeological Resources and Protection Act ("ARPA," 16 U.S.C. 470 aa-mm) applies. If NAGPRA is determined to apply, its procedures must then be followed.

8. Is there evidence of a link, either biological or cultural, between these remains and a modern Indian tribe or to any other ethnic or cultural group including (but not limited to) those of Europe, Asia, and the Pacific islands?

This office does not have sufficient information at this time to provide advice on this question.

9. Are the "study" provisions of 25 U.S.C. 3005 (b) limited to human remains and cultural items in the possession or control of a Federal agency or museum prior to November 16, 1990?

25 U.S.C. 3005 (b), a subsection of section 7 of NAGPRA (25 U.S.C. 3005), applies to the repatriation of Native American human remains and cultural items contained in Federal agency and certain museum collections (whether or not obtained before or after November 16, 1990). This provision is not applicable to Native American human remains and cultural items subject to

NAGPRA's section 3 (excavated or discovered on Federal land after November 16, 1990) (43 CFR 10.10 (c)(1)).

10. Does any other law (e.g., ARPA) or any other section of NAGPRA such as 25 U.S.C. 3002 © or 3003 (b)(2), either permit or forbid scientific study of these remains?

As discussed in our response to question 7, no provision of NAGPRA or other law forbids scientific study of these remains to determine whether they are subject to NAGPRA, and, if so, their appropriate disposition under the statute. However, we would recommend that any additional studies be conducted in consultation with Indian tribes and other interested parties, as appropriate. In addition, if archeological work on Federal land is to be conducted, applicable ARPA permitting and consultation procedures must be followed. Finally, if ownership and control of the human remains or cultural items is determined under NAGPRA to be with an individual or Indian tribe, no further study of such materials may be conducted without the consent of that individual or Indian tribe.

11. Are scientific study and repatriation of human remains mutually exclusive or can both objectives be accommodated?

Both can be accommodated, depending on the particular circumstances of each situation. In some cases, scientific study may be necessary in order to determine whether NAGPRA is applicable and, if so, to determine appropriate disposition under the statute. Additionally, individuals or Indian tribes that exercise ownership and control of the remains under section 3 (a), insofar as Federal law is concerned, may study the remains, or authorize others to study the remains, as they see fit.

12. What law controls if the human remains are not subject to NAGPRA?

If the human remains in question do not fall under NAGPRA, there are two possibilities. The first is that they may be archeological materials subject to ARPA. At this point, this office does not have enough information to know if the remains in question would be within the scope of ARPA, if they are not within the scope of NAGPRA. If neither NAGPRA nor ARPA apply, it is likely that state or local law would dictate the treatment of the remains.

13. What happens to the remains if no present-day Indian tribe can establish cultural affiliation?

As discussed above, in certain circumstances no cultural affiliation is required for section 3 (a) Indian tribe ownership and control of Native American human remains and cultural items.

However, it is possible that no present-day Indian tribe is a qualified owner under any of the categories described in section 3 (a). This would be the case when no cultural affiliation between an Indian tribe and the human remains and cultural items in question can be demonstrated, and, in addition, when the remains and cultural items were not found on tribal land or on Federal land

that is recognized by a final judgment of the Indian Claims Commission or the United States Court of Claims as the aboriginal land of a present-day Indian tribe.

In these circumstances, the Native American human remains and cultural items in question would be subject to disposition under the section 3 (b) regulations to be promulgated by the Secretary of the Interior in consultation with the NAGPRA review committee, Indian tribes, and museum and scientific organizations. A regulatory section has been reserved for that purpose at 43 CFR 10.7. These regulations, when promulgated, will encompass Native American human remains and cultural items for which no qualified owner exists under section 3 (a)'s categories or for which an owner is identified under such categories, but that owner does not make a claim.

14. Do the plaintiffs have a right (under the First Amendment or otherwise) to study these human remains?

As this issue is beyond our program responsibilities and has been briefed by the United States Department of Justice in connection with this matter, we defer to the views of the Department of Justice.

15a. Should non-Indians be permitted to file a claim for these human remains?

Under section 3 (a), an individual who is a lineal descendant, whether or not the individual is a member of an Indian tribe, has a first right to ownership of Native American human remains. In other circumstances, section 3 (a) ownership under the current implementing regulations is limited to Indian tribes and Native Hawaiian organizations.

However, as discussed above, the Secretary of the Interior has authority to promulgate regulations which address the disposition of section 3 Native American human remains and cultural items for which no claim is made pursuant to section 3 (a) or for which no qualified claimant exists. Such regulations, when promulgated, may provide for disposition of unclaimed section 3 Native American human remains and cultural items to persons or entities that are not Indian tribes or members of an Indian tribe.

b. Is there any merit to the equal protection arguments asserted by the plaintiffs?

As this issue is beyond our program responsibilities and has been briefed by the Department of Justice in connection with this matter, we defer to the views of the Department of Justice.

16. What role should the Native American Graves Protection and Repatriation Review Committee play in resolving the issues presented in this case?

The NAGPRA review committee is charged by NAGPRA (section 8, 25 U.S.C. 3006) with monitoring the inventory, summary, and repatriation process required by sections 5, 6, and 7 of NAGPRA applicable to Federal agency and museum collections of Native American human remains and cultural items. (25 U.S.C. 3003-3005). The NAGPRA review committee is not

charged with monitoring activities under section 3 applicable to Native American human remains and cultural items found on Federal or tribal lands after November 16, 1990, the provision of NAGPRA which applies to the human remains in question in this matter if they are determined to be Native American within the meaning of NAGPRA.

However, the Secretary of the Interior has authority under section 8 of NAGPRA to assign additional responsibilities to the review committee. 25 U.S.C. 3006 (c)(8). These responsibilities could include providing advice with respect to the human remains in question. In addition, under section 3 (b), the regulations for unclaimed human remains and cultural items as discussed above are to be promulgated by the Secretary in consultation with the review committee.

17a. Is NAGPRA silent on the important issues raised by this case?

No. For the reasons discussed above, we consider that NAGPRA and its implementing regulations provide all necessary guidance for the disposition of the human remains in question. To summarize, NAGPRA does not prohibit appropriate scientific study to determine whether the human remains at issue are Native American within the meaning of NAGPRA. If they are, NAGPRA provides for their disposition to a lineal descendant, or, in the absence of a lineal descendant, to an Indian tribe qualified under the section 3 (a) categories. If there is no lineal descendant or if there is no qualified Indian tribe under section 3 (a) categories, or, if no Indian tribe which is determined to own the remains makes a claim for the remains, section 3 (b) directs the Secretary of the Interior to provide for their disposition in accordance with published regulations.

b. Will Congressional action be required to clarify the law regarding "culturally unidentifiable ancient remains?"

The term "culturally unidentifiable" as used in NAGPRA relates to Native American human remains contained in Federal agency or museum collections (25 U.S.C. 3006 (c)(5)). Under NAGPRA's implementing regulations, the term is defined as applying to Native American human remains in Federal agency or museum collections that cannot be culturally identified or are not culturally affiliated with a present-day Indian tribe (43 CFR 10.10 (g)).

The term is not applicable to section 3 human remains (human remains discovered on Federal or tribal lands after November 16, 1990). Such unclaimed remains, if no claim is made for them by a qualified lineal descendant or present-day Indian tribe, or, if no such qualified claimant exists under section 3 (a)'s claim categories, will be subject to disposition under regulations to be promulgated by the Secretary of the Interior pursuant to section 3 (b).

Accordingly, we do not consider that Congressional action is required to clarify NAGPRA with respect to the disposition of the human remains in question. If they are Native American within the meaning of NAGPRA, they should be disposed of pursuant to section 3 (a) or 3 (b) of NAGPRA, as applicable.

I hope that these responses prove useful in your efforts to comply with NAGPRA. Please contact me, NAGPRA Team Leader C. Timothy McKeown, or Lars A. Hanslin of the Office of the Solicitor, if you have any additional questions.

Sincerely,

Francis P. McManamon
Departmental Consulting Archeologist
Chief, Archeology & Ethnography Program

ATTACHMENT 2

INTERAGENCY AGREEMENT
BETWEEN THE DEPARTMENT OF THE ARMY AND THE DEPARTMENT OF THE INTERIOR ON THE DELEGATION OF RESPONSIBILITIES UNDER SECTION 3 OF THE NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT PERTAINING TO HUMAN REMAINS DISCOVERED NEAR THE CITY OF KENNEWICK, WASHINGTON

WHEREAS, on July 28, 1996, human remains were inadvertently discovered in Columbia Park, near the City of Kennewick, Benton County, Washington, on land controlled by the U.S. Army Corps of Engineers; and

WHEREAS, on or about September 1, 1996, the Corps Walla Walla District took control of these human remains and proceeded with the understanding that they are subject to the requirements of the Native American Graves Protection and Repatriation Act (NAGPRA) and its implementing regulations; and

WHEREAS, on September 17 and 24, 1996, the Corps Walla Walla District published notices in a newspaper of general circulation in the area of the discovery announcing its decision that the human remains were Native American and were culturally affiliated with five Columbia River basin tribes; and

WHEREAS, on October 16 and 22, 1996, disposition of the human remains became the subject of two lawsuits, Bonnichsen et al. v. United States et al. (D. Oregon, Civil No. 96-1481-JE) and Asatru et al. v. United States et al. (D. Oregon, Civil No. 96-1516-JE); and

WHEREAS, on March 23, 1997, the Corps Walla Walla District rescinded its prior notices regarding the disposition of the human remains.

WHEREAS, on June 27, 1997, the Court vacated the prior decisions regarding disposition of the human remains to the extent they had not already been rescinded and remanded the matter back to the Corps for further consideration; and

WHEREAS, section 3 (d)(3) of NAGPRA stipulates that the responsibilities for determining the disposition of inadvertently discovered Native American human remains may be delegated to the Secretary of the Interior;

NOW, THEREFORE, the Secretary of the Army delegates, and the Secretary of the Interior consents to such delegation of, the responsibility for determining if the human remains found near Kennewick, Washington, are Native American within the meaning of NAGPRA, and, if it is determined that such human remains are Native American, to provide for their disposition under the terms of the statute and its implementing regulations found at 43 CFR 10.3 through 10.7.

STIPULATIONS

I. The Department of the Interior shall determine if the human remains found near Kennewick, Washington are Native American within the meaning of NAGPRA.

II. If the human remains are found to be Native American within the meaning of NAGPRA, the Department of the Interior shall determine their disposition under the terms of the statute and its implementing regulations found at 43 CFR Part 10.3 through 10.7.

III. The Department of the Interior shall be the lead agency in maintaining the official administrative record for the determinations made as required by Stipulations I and II, above.

IV. The Department of the Interior shall design a set of procedures and identify appropriate entities needed to make the two determinations listed in stipulations I and II. These procedures may include, but shall not be limited to: a complete examination and evaluation of the human remains; archeological, ethnographic, and geological and/or geomorphological evaluation of the site of discovery; studies to determine the appropriate disposition and custody of the human remains; and, physical testing of limited portions of the remains, if necessary and appropriate.

V. All activities conducted by the Department of the Interior as part of this agreement shall be done in cooperation with the Department of the Army, and, to the extent required by law or Federal policy, in consultation with appropriate Indian tribes and other interested parties.

VI. The Department of the Army shall procure such studies, tests or items of research determined appropriate by the Department of the Interior under NAGPRA with regard to the human remains discovered near Kennewick, Washington. Any obligation of funds, expenditure of appropriations, or inter-agency transfers will be accomplished in accordance with applicable laws, regulations, policies and procedures.

VII. The Department of the Interior and the Department of the Army shall create a joint review team for the purpose of evaluating the progress of activities designed and implemented pursuant to this agreement. This team shall meet on an as-needed basis, but not less frequently than once each month.

VIII. The joint review team shall designate a point or points of contact for any public information regarding the status and condition of the human remains and the site of discovery, as well as the status of any studies, tests, or items of research developed pursuant to this agreement.

IX. The Department of the Army shall continue to manage and protect the site of discovery of the human remains and adjacent lands owned by the Federal government. The Department of the Army also shall ensure the continued protection and appropriate curation of the human remains.

X. This agreement becomes effective when signed by both signatory parties and remains in effect until modified or terminated. This agreement may be modified or amended at any time, by mutual and written agreement of both parties. This agreement may be terminated by either party upon sixty (60) days prior written notice. This agreement may be modified or amended based on mediation.

XI. This agreement does not create a private right of action in any person or entity to enforce any provision of this agreement or to challenge any agency action taken pursuant to it.

DEPARTMENT OF THE ARMY

DATE: 23 May 98

JAYSON L. SPIEGEL
Acting Assistant Secretary of the Army
for Manpower and Reserve Affairs

DEPARTMENT OF THE INTERIOR

DATE:

DONALD J. BARRY
Acting Assistant Secretary of the Interior
for Fish and Wildlife and Parks

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XI. This agreement does not create a private right of action in any person or entity to enforce any provision of this agreement or to challenge any agency action taken pursuant to it.

DEPARTMENT OF THE ARMY

DATE: _____

JAYSON L. SPIEGEL
Acting Assistant Secretary of the Army
for Manpower and Reserve Affairs

DEPARTMENT OF THE INTERIOR

DATE: 3/24/98

DONALD J. BARRY
Acting Assistant Secretary of the Interior
for Fish and Wildlife and Parks

ATTACHMENT 3

Click to go to:
www.cr.nps.gov/aad/kennewick/index.htm

ATTACHMENT 4

U.S. Department of Justice

Environment and Natural Resources Division

Allison B. Rumsey
Office of Assistant Attorney General
950 Pennsylvania Avenue, N.W.
Washington, DC 20530-0001

Telephone (202) 514-0750
Facsimile (202) 514-0557

February 24, 2000

Alan L. Schneider, Esq.
1437 S.W. Columbia Street
Suite 200
Portland, OR 97201

By Fax and mail

Re: Bonnichsen, et al v. United States, CV-96-1481 JE

Dear Alan,

As you know, the court has ordered the federal defendants to respond to plaintiffs' request to study by March 24, 2000. It is my understanding that plaintiffs' written requests to the U.S. Army Corps of Engineers for Study of the remains consist of letters to the Corps dated September 24 and 26, 1996. In addition, we have a copy of the teleconference between plaintiffs and the U.S. Army Corps of Engineers. Written details of study request were provided in Plaintiffs' Motion For Order Granting Access To Study, filed with the Court on March 11, 1997. Specifically , your Motion requested that the plaintiffs be allowed to conduct the following studies:

1) Morphological Measurements (Skeleton)
2) Taphonomic Observations(Skeleton)
3) Morphometric Measurements(Dental)
4) Imaging (Dental)
5) Molds (Dental)
6) Molds (Cranium)
7) Imaging (Skeleton)
8) Phytolith Recovery (Dental)
9) Radiocarbon Dating
10) Isotope Analysis
11) DNA Analysis
12) Histology.

In order to be responsive to your study requests and to ensure that we have properly described and identified your study request as correctly and precisely as possible I am requesting that you review

the above information. If this list is incorrect, or there is other correspondence to the agency detailing plaintiffs' study request that I have overlooked or not referenced please let me know. Include in your response any additional particular study that plaintiffs' previously have requested, along with informatic about how it would be performed. I would request that your response be as specific as possible and if it refers to previously written letters or filed affidavits and pleadings, provide the date of the submission and where the relevant information can be found within those documents.

Again we want to ensure that we have described and identified your study request as correctly and precisely as possible so that we can be responsive to the studies you have requested. I look forward to hearing from you.

Sincerely,

Allison B. Rumsey

cc: Frank McManamon
Carla Mattix
Sonny Trimble
Russ Petit
Rebecca Ransom
Jason Roberts

ATTACHMENT 5

BARRAN LIEBMAN
ATTORNEYS

Paula A. Barran
(503) 276-2143
pbarran@barran.com

February 28, 2000

VIA FACSIMILE

Allison Rumsey
U.S. Department of Justice
Office of the Assistant General Counsel
950 Penn. Ave., NW, Room 2740
Washington,, D.C. 20530-0001

Re: Bonnichsen v. U.S.
Our File No. 704401-2

Dear Allison:

We have received your letter of February 24, 2000 asking us to confirm that you have described and identified plaintiffs' study request correctly and precisely. While the letter identifies some of the documents (two letters, the study motion, and the teleconference transcript) in which the requests are discussed, it is incomplete.

First, there are additional documents and correspondence which identify various studies. These include, without limitation, correspondence from any of the plaintiffs or other scientists sent to representatives of the government before the subject litigation was filed, additional correspondence from the plaintiffs through their attorneys including letters dated October 1996, and statements in court filings which address study. They are, simply stated, not as limited as your letter suggests.

Second, while your letter lists a variety of studies in an apparent effort to summarize the study motion, it cannot be accepted as a complete listing. For example, certain of the studies plaintiffs propose involve multiple parties, confirming tests, or multiple laboratories. In other respects, you have excluded selected procedures such as discrete trait observations and analyses (cranial and post-cranial), multiple types of imaging, and paleo-pathology analysis, as well as the requested geological investigation of the site. Your letter, which is a simple and incomplete list, does not attempt to reproduce the studies or descriptions the plaintiffs provided, yet you describe it as "specifically" identifying the requested studies.

Third, please understand that the plaintiffs have been largely excluded from any study of the skeleton, with minor exceptions. With that in mind, we believe it is inappropriate to seek to limit the requests as you do in your letter. In the pursuit of scientific inquiry, it may be that additional observations or tests will necessarily flow from any studies conducted by plaintiffs.

With that in mind, we would repeat that the study requests are not as circumscribed as outlined in your letter of February 24, 2000. They include all correspondence between the plaintiffs and the government, the teleconference, and all pleadings and other documents filed in this litigation.

Very truly yours,

BARRAN LIEBMAN LLP

Paula A. Barran

PAB:smb
cc: Alan Schneider

103L2RB.doc

FROM: Allison B. Rumsey
Counsel to the Assistant Attorney General
Environment and Natural Resources Division
Telephone: (202) 514-0750
Fax: (202) 305-2573

Sent by: **Shanedda Lawson (202) 514-3743**

DATE: February 29, 2000

TO:		**FAX:**
	Frank McMannaman	(202) 343-5260
	Jason Roberts	(202) 343-5260
	Carla Mattix	(202) 208-3877
	Sonny Trimble	(314) 331-8895
	Rebecca Ransom	(503) 808-3766
	Tim Simmons	(503) 727-1117
	MaryAnn Kenworthy	(202) 219-1790
	Russ Petit	(202) 761-4932
	Jack Haugrud	By inter-office mail
	Jim Eichner	By inter-office mail
	Aimee Bevan	By inter-office mail

MESSAGE:

BARRAN LIEBMAN LLP
601 S.W. Second Avenue, Suite 2300
Portland, Oregon 97204-3159
Phone: (503) 228-0500
Fax: (503) 274-1212

FAX

To:	Allison Rumsey
Company:	U.S. Department of Justice
Fax No.:	(202) 514-0557
Telephone No.:	

From:	Paula A. Barran	Date:	February 28, 2000
Re:	Bonnichsen v. U.S.	Number of Pages:	3
Client No.:	704401-2	Original to be mailed?	___ Yes _X_ No

Notice:

The information in this message is intended only for the addressee's authorized agent. The message may contain information that is privileged, confidential, or otherwise exempt from disclosure. If the reader of this message is not intended recipient or recipient's authorized agent, then you are notified that any dissemination, distribution or copying of this message is prohibited. If you have received this message in error, please notify the sender by telephone and return the original and any copies of the message by mail to the sender at the address stated above.

Remarks:

ATTACHMENT 6

U.S. Department of Justice

Environment and Natural Resources Division

Allison B. Rumsey
Office of Assistant Attorney General
950 Pennsylvania Avenue, N.W.
Washington, DC 20530-0001

Telephone (202) 514-0750
Facsimile (202) 514-0557

March 8, 2000

Alan L. Schneider, Esq.
1437 S.W. Columbia Street
Suite 200
Portland, OR 97201

Paula Barran
601 S.W. Second Ave., Suite 2300
Portland, Oregon 97204-3159

By Fax and mail

Re: Bonnichsen, et al v. United States, CV-96-1481 JE

Dear Alan and Paula,

In my February 24, 2000 letter I informed you that the agencies would be using the March 11, 1997 Motion For Access To Study filed with the court as the basis for responding to the plaintiffs' study requests. In an attempt to ensure that the agencies respond as accurately as possible to the studies the plaintiffs wish to carry out, I made the reasonable request that you supplement that study request, if appropriate, with citations to the other documents that contain details of the proposed studies.

This is reasonable as there has not been any official administrative request to study, other than the two letters of September 24 and 26, 1996, which I am sure do not encompass all that plaintiffs wish to do. Your response that the March 11, 1997 filing that contains your Request to Study is not in fact your request to study and subsequent refusal to provide any clarity to what your request to study is, is not helpful. While the agencies are looking at every filing and letter ever submitted, much of which has nothing to do with study, they cannot ensure the most accurate response to plaintiffs' request unless you help them.

Therefore, until the agency receives an official request to study or the additional information that

we requested, we will continue to assume that the basis of your request to study is contained in the March 11, 1997 filing.

Sincerely,

Allison B. Rumsey

cc: Frank McManamon
Carla Mattix
Sonny Trimble
Russ Petit
Rebecca Ransom
Jason Roberts

ATTACHMENT 7

FAX / MEMO

Francis P. McManamon
Chief Archeologist
Departmental Consulting
Archeologist

Department of the Interior
National Park Service
National Center for Cultural Resource
Stewardship and Partnerships
Archeology and Ethnography Program
Mail: 1849 C Street(NC 340/2275), Washington, DC 20240
Location: Suite 340, 800 North Capitol St., NW 20002
Voice: (202) 343-4101 Fax: (202) 343-5260
email: fp_mcmanamon@nps.gov

19 September 2000

To: Becky Ransom, Division Counsel, COE-Portland (fax: 503-808-3766)

From: Francis P. McManamon FPMc

Pages: 47

Subject: Additional Information Comparing Research Completed with Proposed

Attached are detailed notes for your information and use comparing the research undertaken and completed as part of the government's investigation of the Kennewick remains and the discovery site with the research proposed by the Bonnichsen plaintiffs.

Xc: Russ Petit, COE
Aimee Bevan, DOJ
Carla Mattix, DOI

ATTACHMENT 7

ENCLOSURE 1

Jason C. Roberts
Notes: June 1999 – August 2000

Comparison between studies initiated by the Department of the Interior on the Kennewick human remains and those requested and recommended by Plaintiffs (Bonnichsen et al. v. United States).

Comparison:

Plaintiffs' / Experts' Recommended Studies	DOI's / Experts' Completed Sudies
1. **Metric Analyses** – measurements to be taken of the following regions: a.) Skull b.) Postcranial Bones – to ascertain body proportions c.) Dentition - Specially designed measurement protocols have been developed by the following individuals: a.) C. L. Brace (skeleton) b.) G. W. Gill (skeleton) c.) R. Jantz and D. Owsley (skeleton) d.) J. Powell (dental & skeleton) e.) D. G. Steele (skeleton) - Measurements will be compared to unique databases developed by the following individuals: a.) R. Jantz and D. Owsley (includes W.W. Howells database) b.) D. G. Steele and J. Powell c.) C. L. Brace	1. **Metric Analyses** – measurements were taken by J. Powell and J. Rose from the following regions: a.) Skull b.) Postcranial Bones c.) Dentition - Protocols/Methods designed by the following individuals were used: a.) D. G. Steele (skeleton) b.) J. Powell (dental & skeleton) c.) Brace and Hunt d.) Turner et al. e.) T. Holiday f.) Gill and Rhine g.) Bass h.) Martin and Saller i.) Buikstra and Ubelaker - Measurements were compared to the following databases/descriptions: a.) W. W. Howells (skeletal) b.) Hanihara (skeletal) c.) Wolpoff (dental) d.) J. Powell (dental) f.) T. Holiday
2. **Discrete Trait Analyses** – examining and recording traits from the following areas: a.) Skull b.) Postcranial Skeleton c.) Dentition	2. **Discrete Trait Analyses** – traits were examined and recorded by J. Powell and J. Rose from the following areas: a.) Skull b.) Postcranial Skeleton c.) Dentition

Plaintiffs' / Experts' Recommended Studies	DOI's / Experts' Completed Sudies
- Specially designed recording protocols have been developed by the following individuals: a.) D. G. Steele b.) J. Powell c.) C. Turner d.) D. Owsley and R. Jantz e.) G. W. Gill f.) C. L. Brace	- Protocols/Methods designed by the following individuals were used: a.) D. G. Steele b.) J. Powell c.) Turner (dental) d.) ASU Dental Anthropology System e.) Buikstra and Ubelaker (cranial) f.) deStefano and Hauser (cranial)
- Presence/Absence of traits will be compared to unique databases developed by the following individuals: a.) D. G. Steele b.) J. Powell c.) C. Turner	- Presence/Absence of traits were compared to the following databases/descriptions: a.) C. Turner b.) deStefano and Hauser c.) Ossenberg d.) J. Powell
3. **Taphonomy/Paleopathology/Health & Lifestyle** - D. Owsley and Team of Specialists R. Jantz and other Plaintiffs Other Scientists	3. **Taphonomy/Paleopathology/Health & Lifestyle** - conducted by J. Powell and J. Rose between February 25 and March 1, 1999. Also by J. Powell, Philip Walker, and Clark Larsen between April 24-26, 2000.
4. **Image Record** – a.) 35mm color slides and black and white photographs of the cranium and postcranial skeleton. b.) Digital photographs for three dimensional computer models. c.) X-rays of the Cranium and postcranial skeleton (including dental). d.) Cross-sectional CAT scans of the cranium and postcranial skeleton.	4. **Image Record** – conducted for 1st [Feb. 25-March 1, 1999] and 2nd [April 24-26, 2000] exams: a.) Radiographs (X-rays) – cranium and postcranial skeleton - 1st exam. b.) Computerized Axial Tomography (CAT) – cranium and postcranial skeletal elements (cross sections – digital imaging) - 1st exam. c.) 35mm Film - reconstructed skull was photographed 1st exam. d.) 35mm Film - taken of skeletal elements by J. Powell, Philip Walker, and Clark Larsen between April 24-26, 2000, for taphonomic study - 2nd exam.
5. **DNA Extraction/Analysis** -	5. **DNA Extraction/Analysis** - Pending [David G. Smith - UC-Davis, Andrew Meriwhether - U. Michigan, and Frederika Kaestle - Yale] - mitochondrial (mtDNA) and Y chromosome analysis.
6. **Radiocarbon** - AMS+ a.) Thomas Stafford (AMS + multiple fraction analysis) b.) R. E. Taylor (AMS)	6. **Radiocarbon** – Conducted by U.C. Riverside, Beta Analytic, and U. Arizona (All AMS C14).
7. **Collagen Analysis** -	7. **Collagen Analysis** – Conducted by R. E. Taylor, U.C. Riverside and Beta Analytic.
8. **Isotopic Analysis** -	8. **Isotopic Analysis** – Conducted by R. E. Taylor, U.C. Riverside and Beta Analytic.
9. **Antibody Studies** -	9. **Antibody Studies** – Not Conducted
10. **Section Analysis-Dental**	10. **Section Analysis-Dental** – Not Conducted
11. **Bone Histology** -	11. **Bone Histology** – Not Conducted

Plaintiffs' / Experts' Recommended Studies	DOI's / Experts' Completed Sudies
12. **Casts/Molds -** (Cranium / Dental)	12. **Casts/Molds** – Virtual Cast was produced by CAT scan / digital imaging during 1st exam conducted between Feb. 25-March 1, 1999. Bone surface casts taken during 2nd exam between April 24-26, 2000.
13. **Phytolith Recovery -**	13. **Phytolith Recovery** – Not Conducted (J. Powell noted lack of calculus on teeth during 1st exam conducted between Feb. 25-March 1, 1999).
14. **Detection and Analysis of Adhering Soil** : D. Owsley and Team (Also for Taphonomic Study).	14. **Detection and Analysis of Adhering Sediment (Skeletal)** Conducted by G. Huckleberry and J. Stein between Feb. 25-March 1, 1999: a.) Site Stratigraphy Described. b.) Skeletal Sediment Detected and Removed. c.) Selection of Site Sediments for Comparison with Skeletal Sediments. d.) Granulometry e.) Thin-Section (Micromorphology) Analysis. f.) Thermogravimetric Analysis. g.) X-ray Diffraction. h.) Trace-Element Analysis.
15. **Further Study of the Discovery Site**. a.) D. Owsley and Team.	15. **Further Study of the Discovery Site**: Recommended by G. Huckleberry and J. Stein.
16. **Analysis of the Lithic Object** Embedded in the Pelvis – to be conducted by: a.) R. Bonnichsen. b.) D. J. Stafford. c.) D. Owsley.	16. **Analysis of the Embedded Lithic Artifact -** Conducted by J. Fagan: a.) Visual Inspection. b.) Artifact Description. c.) X-rays and CAT Scans. d.) Typological Assessment. e.) Artifact Comparisons.
17. **Skeletal Reconstruction** a.) D. Owsley / Assistants b.) David R. Hunt	17. **Skeletal Reconstruction -** Conducted by J. Powell and J. Rose between Feb. 25-March 1, 1999. Also conducted by J. Powell, Clark Larsen, and Philip Walker between April 24-26, 2000
	18. **Cultural Affiliation Studies** a.) Review of Archaeological Data – K. Ames b.) Review of Traditional Historical & Ethnographic Information – D. Boxerger c.) Review of Bio-Archaeological Information – S. Hackenberger d.) Review of Linguistic Information – E. Hunn

Synthesis of supporting documentation for the comparison between studies initiated by the Department of the Interior on the Kennewick human remains and those requested and recommended by Plaintiffs (Bonnichsen et al. v. United States).

1.) Plaintiffs' recommended studies:

I. Plaintiffs' Settlement Document (Offer) – November 8, 1996 (Faxed Copy – Pages 2-10).

A. Skeletal Properties Studies:

(i.) **Measurements and Qualitative Assessments** (Non-Destructive Analyses) –"…these examinations are noninvasive and would not damage the skeleton in any way" [pg. 6 - 1].

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Metric Analyses:	"Metric analysis of the cranial and postcranial skeleton… are essential for determining ancestry, race, sex, and the activities conducted by the Kennewick Man during his life. These measurements are also important for characterizing human populations and for making comparisons between populations" [pg. 6 - A].	
	a.) Comparisons will be made between the Kennewick remains and many populations using "specialized measuring instruments for taking precise measurements of human remains," as well as the Owsley/Jantz database (contains descriptive characteristics from over 5,000 skeletal remains) [pg. 6 - A].	D. Owsley. R. Jantz.
	b.) Approximately 28 measurements of the Kennewick skull would be used in a statistical analysis. Measurements (dental) of crowns and cervical margins of the teeth will be taken for use in multivariate forms of analysis. The bones of the postcranial skeleton will be also be measured to ascertain body proportions. These measurements will be applied to the Texas A&M Database to obtain comparisons with modern and ancient remains from around the world [pg. 7 - A].	D.G. Steele. Joe Powell. Roberta Hall.
	c.) Craniofacial characteristics and a specialized measurement protocol will be used along with C. L. Brace's database (contains data on 5,000 to 6,000 crania from around the world) [pg. 7 - A].	C.L. Brace.

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
	d.) Over 140 measurements and separate observations, designed to permit classification of remains to specific racial groups, will be taken using specialized measurement instruments [pg. 7 - A].	G. Gill.
2. Discrete Trait Analyses:	Non-metric traits, both cranial and postcranial, will be used to measure affinity among Native American groups. "These non-destructive observations may include more than 25 noncranial metric traits that can be studied from a statistical perspective" [pg. 7 - B].	Nancy S. Ossenberg. Any Plaintiff(s) - ?
3. Paleopathology:	This analysis of the remains will be utilized to reveal the life history of the individual – "e.g., health, broken and healed bones, disease history, extent of osteoporosis, and in some cases how some individuals participated in their biosocial environments" [pg. 7 – C].	Any Plaintiff(s) - ?
4. Dental Analyses:	Focus on measuring crowns, cervical margin(s), and root patterns to provide information for describing the dental characteristics and dental pathology (such as enamel hypoplasia) of an individual (used for assessing relationships between populations). In addition to this qualitative and quantitative analysis of dental characteristics, a microscope examination (Scanning Electron Microscope) will be conducted (provides insight into dietary and cultural patterns [pg. 8 – D].	Christy Turner. Joe Powell.
5. Imaging:	The following image or data recording techniques should be used: i.) complete two-dimensional photographs; ii.) cat scans; iii.) x-rays; iv.) casts for fabricating reproductions of the skull and other elements; v.) special photographs for computer imaging; vi.) electron microscopy of the teeth [pg. 8 – E].	Qualified Experts.

(ii.) **DNA Analysis** (Destructive Analysis) – "… essential for determining the relationship between Kennewick Man, modern Native American groups, and other human populations in the world (past and present)" [pg. 8 - 2].

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. DNA extraction/analysis:	Using non-diagnostic bone elements, such as rib fragments, both mitochondrial (mtDNA) and nuclear DNA should be studied. More than one laboratory should be invited to analyze these human remains. DNA testing would require approximately 2 to 4 grams of bone [pg. 8 – 2].	R. Bonnichsen and Colleagues at OSU. Other independent specialists (labs).

(iii.) **C-14 Dating** (Destructive Analysis) [pg. 8 – 3].

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. C-14 Dating:	One or two additional C-14 samples should be taken from other bones to verify earlier date. Each C-14 sample would require approximately 5 grams (or possibly less) of bone [pg. 8 – 3].	?

(iv.) **Collagen Analysis** (Destructive Analysis) [pg. 8 – 4].

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Collagen Analysis:	Used to determine the integrity of the amino acid assemblage. Will also indicate if bone integrity is adequate for DNA testing – requires only a few grams of bone [pg. 8 – 4].	?

(v.) **Isotopic Analysis** (Destructive Analysis) [pg. 9 – 5].

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Isotopic Analysis:	Analysis of various trace elements and isotopic ratios of the bone. Such tests provide data that can be used to reconstruct diet, health history, and disease profile. One sample would require about two grams of compact bone [pg. 9 – 5].	?

(vi.) **Antibody Studies** (Destructive Analysis) [pg. 9 – 6].

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Antibody Studies:	Used to reconstruct the origins and evolution of different diseases. Would require approximately 15 grams of dense bone, but this same sample could also be used to provide most of the material needed for radiocarbon dating, trace element, and isotopic analysis, and some of the DNA analysis [pg. 9 – 6].	?

(vii.) **Section Analyses** (Destructive Analysis) [pg. 9 – 7].

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Section Analysis - Teeth:	Wilson band analyses of teeth (use of thin vertical sections) to provide information on childhood morbidity [pg. 9 – 7].	?
2. Section Analysis: Bone:	An osteon count can provide an independent confirmation of the chronological age of the Kennewick Man. This procedure involves evaluation of a cross section cut through the midshaft of a long bone (such as a tibia, fibula, or femur) [pg. 9 – 7].	?

B. Contextual or Site Studies:

(i.) **Geoarchaeological Investigation** [pg. 9 – 1].

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Geoarchaeological Investigation:	To assess the stratigraphic and geomorphic context in which the human remains were found. These data are important for determining if the Kennewick discovery is a deliberate burial. Such a study should document the geomorphology and stratigraphy of the burial location [pg. 9 – 1].	?
2. Geochronology:	The site deposits and skeletal remains need to be independently dated to demonstrate they are contemporaneous [pg. 10 – 2].	C. V. Haynes.

C. Taphonomy:

(i.) **Taphonomic Analysis** [pg. 10].

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Taphonomic Analysis:	Needed to understand how the Kennewick skeleton passed from life into the prehistoric record and how it became exposed. This would include the study of the imbedded projectile point. Such a study would seek to determine the physical, chemical, biological, and cultural processes that may have affected the skeleton. This data can provide information about cause of death, mode of deposition, how the bones have been altered since the time of burial, etc. More than one group of specialists should be invited to study the skeleton and the site.	Plaintiffs. Other Specialists.

II. Plaintiffs' Motion For Order Granting Access to Study – March 11, 1997 (Court Document – Pages 1-4).

Plaintiffs' Seek to Conduct the following Examinations and Scientific Studies:

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Morphological Measurements (Skeleton):	a.) Physical Examination of the skeleton, which will include the taking of cranial and postcranial measurements, observation and description of morphological characteristics, the entry of such measurements and observations into databases, and analysis thereof [pg. 1-2, par. 1]. Non-Destructive.	R. Jantz. D. Owsley. 3-4 members of investigation team.
	b.) Physical Examination of the skeleton, which will include the taking of cranial and postcranial measurements (including assessment of interorbital projection by sinometer measurement, assessment of nasal bone form and size, examination of zygomaticomaxillary suture form, measurement of femoral shaft diameters and torsion, assessment of the palate and palatine suture shapes, observation of chin form and mandible traits, assessment of cranial height and contour), the entry of examination measurements and observations into a database, and analysis thereof [pg. 2, par. 2]. Non-Destructive.	G. Gill. Assistant.
	c.) Examination of the skeleton, which will include the taking of various observations and measurements, their entry into a database, and analysis thereof [pg. 2, par. 3]. Non-Destructive.	C. L. Brace. Doctoral Student.
	e.) Examination of the skeleton, which will include the observation and recording of discrete traits, the taking of morphometric measurements of various cranial features, their entry into a database, and analysis thereof [pg. 2, par. 4]. Non-Destructive.	D. G. Steele. R. Hall.
2. Taphonomic Observations (Skeleton):	Analysis of skeleton – taphonomy [pg. 2, par. 5].	D. Owsley. R. Bonnichsen. Assistants.
3. Morphometric Measurements (Dental):	a.) Morphometric measurements and discrete trait observations of the dentition and analysis thereof [pg. 2, par. 6]. Non-Destructive.	Joe Powell
	b.) Observation, comparison, and assessment of dental discrete traits [pg. 2, par. 7]. Non-Destructive.	Christy Turner
4. Imaging (dental):	High quality dental X-rays for dental studies. Taken at local hospital [pg. 2, par. 8]. Non-Destructive.	Appropriate Specialists.

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
5. Molds (Dental):	Dental molds are to be taken with the subsequent study of these casts by a scanning electron microscope at the University of New Mexico [pg. 3, par. 9]. Non-Destructive.	Joe Powell.
6. Molds (Crania):	Molds of the crania and key postcranial bones should be made [pg. 3, par. 10]. Non-Destructive.	D. Owsley. Expert assistance.
7. Imaging (Skeleton):	a.) A complete image record should be produced, including 35 mm color slides, scaled black and white photographs in correct orientation, and digital photographs for 3 dimensional computer models [pg. 3, par. 11]. Non-Destructive.	D. Owsley's Team.
	b.) X-rays and cross sectional CAT scans should be produced at a local hospital [pg. 3, par. 12]. Non-Destructive.	Supervision of D. Owsley & J. Chatters.
8. Phytolith Recovery (Dental):	Recovery of phytoliths (dental calculus studies) from teeth [pg. 3, par. 13]. Non-Destructive.	J. Chatters + Dentist. Amy Ollendorf.
9. C-14:	AMS radiocarbon dating of multiple different protein fractions from samples taken from non-diagnostic bone (under 2 grams) [pg. 3, par. 14]. Destructive.	Thomas Stafford (extraction). John Southon (Livermore Lab).
10. Isotope Analysis:	Stable isotope analysis of carbon and nitrogen from samples taken from non-diagnostic bone by-products derived from the sample extracted for radiocarbon dating [pg. 3, par. 15]. Destructive.	Thomas Stafford.
11. DNA Analysis:	DNA extraction, replication (or amplification) and analysis to be performed on a non-diagnostic bone sample (requiring approximately 2 grams of bone) [pg. 3, par. 16]. Destructive.	R. Bonnichsen. Walter Ream & Katherine Field.
12. Histology:	Microscopic analysis of bone cortex (bone histology) which will involve the extraction of a segment of a leg or arm bone (approximately ½ inch) and its cross sectioning [pg. 4, par 17]. Destructive.	D. Owsley. Douglas Ubelaker.

III. Plaintiff's Memorandum in Support of Motion for Order Granting Access to Study – March 11, 1997 (Court Document – Pages 1-26).

Tests and Studies Requested by Plaintiffs:

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Measurements and Observations:	Morphometric measurements and related observations of the cranium and post-cranial skeleton will compare Kennewick Man with other populations, prehistoric and modern, through databases containing measurements on thousands of individuals (see Brace, Jantz, and Owsley affidavits) [pg. 5 – a].	C. L. Brace. R. Jantz. D. Owsley.
2. Dental Characteristics:	Kennewick Man's teeth will be compared, through measurements and discrete traits, to those of other populations (see Owsley, Powell, and Turner affidavits) [pg. 5 – b].	D. Owsley. Joe Powell. Christy Turner.
3. DNA:	Kennewick Man's gene sequences will be compared to other populations to determine the degree of similarities or dissimilarities. This will permit an assessment of genetic relationships to various modern populations (see Bonnichsen affidavits) [pg. 5 – c].	R. Bonnichsen.
4. Diet:	Tests will be conducted to reconstruct the foods that made up Kennewick Man's normal diet. Such data may permit inferences to be made concerning where he obtained his food sources, which in turn may reveal whether Kennewick Man came from another region (see Ollendorf and Stafford affidavits) [pg. 6 – d].	Amy Ollendorf. Thomas Stafford.

Note: The above tests and studies requested by plaintiffs are designed to address the issue of Kennewick Man's relationship to modern peoples [pg. 5 – 1].

Note: "Only three of the tests and studies proposed by the plaintiffs involve any loss of skeletal matter: The DNA analysis, requiring 2 grams of bone (approximately .07 ounces), is the only test that can directly measure Kennewick Man's genetic relationship, if any, to modern Native Americans. The radiocarbon and stable isotope tests, also requiring 2 grams of bone, are critical for verifying the skeleton's geologic age and for nutritional analyses. The bone histology, requiring a small segment of leg bone, is essential to determine Kennewick Man's age at death; this type of information is necessary in order to test the accuracy of the other observations discussed above" [pg. 6].

IV. Affidavits in Support of Plaintiffs' Motion to Study Kennewick Remains - 1997 (Court Documents).

A. Affidavit of Robson Bonnichsen – February 5, 1997 (Court Document – Pages 1-7):

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. DNA Analysis:	The samples needed for these tests can be taken from non-diagnostic bone (i.e., from a rib, vertebra, digit, etc.), and would require less than two grams of bone [pg. 2, par. 3]. The recovered DNA (sequences of mtDNA) from Kennewick Man will be compared to Available data on the mtDNA of modern and prehistoric populations to address the following questions [pg. 5, par 8]: (a) Does Kennewick Man have closer affinities to Asian or European populations than to modern Native Americans? (b) Is Kennewick Man part of a unique early North American human population that did not survive over time? (c) Is Kennewick Man a direct ancestor of any of the tribes who have claimed him? The DNA tests will be performed as follows [pg. 5-6, par. 10]: (1) A sample of non-diagnostic bone will be removed (less than 2 grams of bone). (2) The bone sample will be chemically and mechanically treated to extract a concentrated sample of bone mtDNA. (3) The extracted DNA will be replicated (or amplified) to produce sufficient quantities of DNA for sequencing analysis. The polymerase chain reaction (PCR) process will be utilized in the amplification process. (4) The amplified mtDNA sequences will be analyzed and compared to mtDNA sequences for different human populations.	R. Bonnichsen. Walter Ream. Katherine Field.

B. Affidavit of C. Loring Brace –February 13, 1997 (Court Document – Pages 1-6).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Morphometric Measurements (Skeleton):	Measurements and observations of the skeleton using a specially constructed instrument called a simometer (a form of caliper) and a uniquely developed measurement protocol [pg. 4,.par. 7]. These measurements will be analyzed with the use of a specialized database, which contains similar measurements from world-wide populations.	C. L. Brace. Assisting Doctoral Student.

Note: "Where possible, morphometric comparisons should always be checked against the growing database now being compiled by molecular biologists…. Because no single technique will normally be conclusive by itself, the best possible results are obtained through multiple analyses to determine if we have agreement between more than one kind of approach. For this reason, the Kennewick Man skeleton should be analyzed from as many different perspectives as possible. These perspectives should include morphometrics, dental traits, molecular anthropology, and other appropriate tests and procedures" [pg. 5, par. 11].

C. Affidavit of George W. Gill – February 16, 1997 (Court Document – Pages 1-5).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Morphometric Measurements (Skeleton):	In addition to the standard cranial and postcranial measurements, the following observations and measurements should be taken [pg. 3, par. 4]: (a) Assessment of interorbital projection. This procedure… utilizes six measurements of mid-facial breadth and projection taken with a specialized coordinate caliper called a simometer. From these six measurements, three indices are calculated which allow correct classification in approximately 90% of cases with regard to Caucasoid vs. Non-Caucasoid ancestry. (b) Assessment of nasal bone form and size. These bones differ in form and contour between Caucasoid and North American Indian populations. (c) Examination of zygomaticomaxillary suture form. Caucasians have curved sutures; North American Indians have angled ones. (d) Measurements of femoral shaft diameters and torsion. Separates North American Indians from Caucasian populations in over 85% of cases. (e) Assessment of the palate and palatine suture shapes. North American Indians differ from Caucasians in this area of the facial skeleton. (f) Observations of chin form and mandible traits. Certain features of this bone differ between Caucasian and North American Indian populations. (g) Assessment of cranial height and contour. Modern North American Indians have distinctive features of the cranial vault which distinguish them from Caucasians.	G. W. Gill.

D. Affidavit of Richard L. Jantz – February 13, 1997 (Court Document – Pages 1-6).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Morphometric Measurements (Skeleton):	Through the use of a measurement protocol, developed with D. Owsley, the Kennewick skeleton will be examined and the findings will be compared to a unique database. The protocol involves three phases [pg. 2-3, par. 3]: (a) Data acquisition. The data acquisition phase consists of the physical examination of the skeletal remains and the taking of a standardized set of detailed cranial and postcranial measurements. Over 60 separate measurements are taken of the cranial features, and over 70 measurements of the postcranial features. (b) Data entry: Entry of the acquired data into a computer database, which contains measurements on over 6,000 individuals. (c) Data analysis. The assessment of an individuals biological affinity is made through the application of the database and a comparison of the results.	R. Jantz. D. Owsley.

Note: Database includes the measurements of 2,500 crania from the database developed by W. W. Howells.

E. Affidavit of Amy L. Ollendorf – February 10, 1997 (Court Document - Pages 1-6).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Phytolith Analysis (Dental):	The methodology for a phytolith analysis of the Kennewick Man's dental calculus is as follows: (a) The selected teeth are cleaned to remove contaminants. (b) Calculus is removed from the teeth. (c) The calculus samples are examined with the use of a microscope. If phytoliths are found, Nomarski DIC or transmission electron microscopic techniques will be used to confirm their identity.	A. Ollendorf. James Chatters. Supervised Dentist.

F. Affidavit of Douglas W. Owsley – March 4, 1997 (Court Document – Pages 1-12).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Morphometric Measurements (Skeleton):	Cranial and postcranial measurements with the use of an examination protocol and a unique computer database (developed with R. Jantz) [pg. 2, par. 3]. In addition to these measurements, detailed dental and bone observations are taken. These observations should be supplemented by [pg. 3, par. 4]: (a) A complete image record. (b) A mold for casts of the cranial and selected postcranial bones. (c) Bone histology.	D. Owsley. R. Jantz.
2. Dental and Bone Observations:	Skeletal remains can provide information for discerning patterns and trends in ancient population demography, health, origin, migrations, gene flow, microevolutionary change, sociocultural interactions, activity patterns and lifestyle [pg. 3-5, par. 5-6].	D. Owsley. R. Jantz.
3. Taphonomy:	Examination of bone modification characteristics.	R. Bonnichsen.
4. Image Record:	To permit maximum data preservation and retrieval, the image record should consist of the following [pg. 6, par. 9]: (a) 35 mm color slides and black and white photographs of the cranium and postcranial skeleton. (b) Digital photographs for three dimensional computer models. (c) X-rays of the cranium and postcranial skeleton. (d) Cross-sectional CAT scans of the cranium and postcranial skeleton.	Appropriate Experts.
5. Casts:	A mold (plaster or epoxy) should be taken of the skull so one or more casts can be made of the cranium and dentition to supplement the image record [pg. 7, par. 14].	Expert Under Direction of D. Owsley.

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
6. Bone Histology:	Microscopic analysis of the bone cortex. Histology involves cross-sectioning a leg bone. The cross section is examined under a high-power optical microscope to evaluate structural features in the bone cortex. The resulting estimation of age at time of death will be among the most accurate possible [pg. 8-9, par. 18-19]. This procedure will require the removal of a small cross-section (approximately one-half inch or less) from one of the leg bones [pg. 9, par. 21].	Douglas Ubelaker.

Note: "The combination of these studies, together with R. Bonnichsen's DNA analysis, will allow a very accurate and reliable assessment to be made of the Kennewick Man's relationship (if any) to modern Native American peoples" [pg. 10, par 25].

G. Affidavit of Joseph F. Powell – February 21, 1997 (Court Document – Pages 1-5).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Morphometric Measurements (Dental):	Approximately 180 measurements will be taken (depending on condition of dentition) of those dental features that have the greatest potential for establishing biological affinities among and between populations [pg. 2, par. 3]. These measurements will be compared to a unique computer database [pg. 3, par. 4].	J. Powell.
2. Discrete Trait Observations (Dental):	Approximately 82 observations concerning the presence or absence of selected dental traits that are thought to be genetically controlled will be taken. These observations will be analyzed with the use of a computer database. Additionally, dental wear patterns will be taken [pg. 2-3, par 3].	J. Powell.
3. Morphometric Measurements (Skeleton):	Approximately 50 cranial measurements will be taken [pg. 2-3, par 3].	J. Powell.
4. Casts (wear patterns):	Molds of the teeth will be taken so casts can be made. These casts will be examined with a scanning electron microscope to observe and record dental wear patterns.	J. Powell.

H. Affidavit of D. Gentry Steele – February 13, 1997 (Court Document – Pages 1-6).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Morphometric Measurements (Skeleton):	Using a standardized protocol, approximately 150 measurements will be taken of the cranium and of the postcranial skeleton [pg. 2-3, par. 3]. These measurements will be compared, using univariate, bivariate, and multivariate statistical programs, to a database containing similar measurements taken from other populations [pg. 3, par. 4].	D. G. Steele J. Powell.

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
2. Discrete Trait Analyses (Skeleton):	Using a standardized protocol, observations will be made and recorded concerning the presence or absence of up to 91 anatomical features that are known to have a variable expression between and among different populations [pg. 2-3, par. 3].	D. G. Steele. J. Powell.

I. Affidavit of Christy G. Turner II – January 24, 1997 (Court Document – Pages 1-6).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Discrete Trait Observations (Dental):	With the use of a specialized protocol, 29 dental morphological features, which are genetically determined, will be recorded. These features include both crown traits (shape, grooves, ridges, etc.) and root traits (number of roots, and presence or absence). Data covering these traits will be entered into a computer database that permits similarities and dissimilarities between different populations to be analyzed with statistical techniques. This database holds observations on more than 25,000 individuals [pg. 2-3, par. 3].	Christy Turner.

V. Plaintiffs' Examination Recommendations from Other Sources (1998).

A. Plaintiffs' Comments on DOI Draft Approach to Documentation – July 9, 1998 (Letter from A. Schneider – Pages 1-13).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Radiocarbon Dating:	"Although plaintiffs originally requested two additional radiocarbon dates, it has become imperative to obtain more…. A total of four to six radiocarbon dates would be consistent with practices followed elsewhere [pg. 8, par. 6].	

Note: The remaining recommendations forwarded in this document stress the need for the Department of the Interior to follow the examinations and tests proposed by the plaintiffs in their motion to study and supporting affidavits.

B. Plaintiffs' Proposed Experts for DOI's Examination – November 18, 1998 (Fax from A. Schneider – Pages 1-3).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Physical Examination (Skeleton/Dental):	(a) Inventory of entire skeleton.	D. Owsley.
	(b) Taphonomy.	D. Owsley. R. Bonnichsen.
	(c) Detection and Analysis of Adhering Soil – "… such an analysis may be inconclusive if further study of the discovery site is not conducted" [pg. 2, -1a].	D. Owsley.
	(d) Analysis of the Lithic Object Embedded in the Pelvis.	R. Bonnichsen. D. J. Stafford. D. Owsley.

Note: The remaining recommendations forwarded in this document stress the need for the Department of the Interior to follow the examinations and tests proposed by the plaintiffs in their motion to study and supporting affidavits.

VI. Plaintiff's July 1, 1999, Status Report (Faxed Copy – Pages 1-4)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Investigation of Recovery Site	"Although plaintiff's believe that study of the site, now buried under rubble could nevertheless contribute some information about the skeleton, such study continues to be denied" [pg. 2, ln 11-13].	

VII. Plaintiffs' Motion for Immediate Response Regarding Study Request - August 3, 1999 (Faxed Court Documents)

A. Memorandum in Support of Plaintiffs' Request for Immediate Response Regarding Study Request - August 3, 1999 (Faxed Court Document - pg. 1-14)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. CAT Scans / Imaging for Projectile Point Analysis	The government's plan [February 25 - March 1, 1999] includes some of the proper components, but there are deficits that will necessarily affect the result. Those deficits include the equipment apparently in use by the government's team. Dr. Fagan of the government's team has reported that he cannot interpret CAT scans of the projectile point; however, better equipment is available through Dr. Owsley and the institution [Smithsonian] where he is employed [pg. 7, ln. 17-21].	Dr. Owsley Smithsonian Institution CAT Scaner
2. Metric Analysis	The government's analysis [February 25 - March 1, 1999] does not precisely replicate the database measurements needed for inclusion in the Owsley/Jantz database [pg. 7, ln. 21-23].	D. Owsley R. Jantz
3. DNA	… glaring deficiency being the absence of DNA testing which is necessary to assess affinities [pg. 7, ln. 24-25].	
4. Skeletal Reconstruction	Moreover, defendants have not included specialists in important areas such as skeletal reconstruction which is a complex process that could affect the accuracy of measurements [pg. 8, ln. 3-6]. … multiple opportunities for reconstruction of important skeletal remains by independent investigators is a standard accepted practice in the scientific community [pg. 9, ln. 20-21].	David Hunt

B. Affidavit of Robson Bonnichsen - July 23, 1999 (Faxed Court Document - pg. 1-10)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Cranial / Skeletal Examinations	[pg. 5]	C. Brace G. W. Gill D. G. Steel Assistants
2. Dental Observations	[pg. 5]	C. Turner
3. Cranial / Dental Examinations	For verification of existing data [pg. 5]	J. Powell
4. Health / Lifestyle Observations	[pg. 5]	D. Owsley Smithsonian Team

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
5. Taphonomic Observations	[pg. 5]	D. Owsley R. Bonnichsen
6. Photography	[pg. 5]	D. Owsley's Assitant
7. Digital Imaging	[pg. 5]	Dr. Owley's Study Team
8. Skeletal Reconstruction	[pg. 5]	David Hunt
9. Phytolith Analysis	Non-invasive examination of dental calculus to obtain dietary data [pg. 5, par. 21-22].	Dr. Ollendorf
10. DNA Analysis	To determine "Kennewick Man's relationship, if any, to modern living peoples… [pg. 6, ln. 15-16].	

C. Affidavit of David R. Hunt - July 20, 1999 (Faxed Court Document - pg. 1-6)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Skeletal Reconstruction	The objective of reconstruction is to restore in a reliable manner a skeleton (or a portion thereof) to a condition that is as close as possible to the original morphology of the living person [pg. 4, ln. 3-5]. Such a reconstruction should be done by someone other than the prior reconstruction in order to determine the accuracy of the government's reconstruction. Even slight errors in a reconstruction can have a significant effect on skeletal measurements and on the reliability of any inferences drawn from such measurements [pg. 25-26, ln. 25-26, 1-2].	David Hunt

D. Affidavit of George W. Gill - July 14, 1999 (Faxed Court Document - pg. 1-4)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Metric Analyses	It is important that I [G. Gill] be allowed to personally examine the skeleton. Although Dr. Powell is a fine scientist, he does not usually take the types of measurements or visual observations that I use in my research. Some of my most important measurements are taken with a special type of simometer that I developed… [pg. 3, ln. 16-19].	G. Gill
2. Non-Metric Traits	My [G. Gill] skeletal analyses also include the observation and recording of a battery of nonmetric traits. These are characteristics that are not determined metrically (i.e., in terms of precise length or width). Instead, they are scored on the basis of presence or absence and the degree or development [pg. 3, ln. 24-26].	G. Gill
3. Database Application (Metric / Non-Metric)	My database alone contains measurements and observations on more that 1350 prehistoric North American, Polynesian, Peruvian and West Mexican skeletons. Many of these are not found in other databases. It is my understanding that the databases used by Drs. Brace, Jantz and Turner also contain samples not found elsewhere [pg. 4, ln. 16-20].	G. Gill C. Brace R. Jantz C. Turner

E. Affidavit of C. Loring Brace - July 16, 1999 (Faxed Court Document - pg. 1-4)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Metric / Non-Metric Analysis Database Application	The studies conducted by the defendants' study team [Feb. 25 – March 1, 1999] are not an adequate substitute for examination of the skeleton by myself and other interested scientists. While I respect the professional competence of Dr. Powell, my database includes measurements that he does not normally take [pg. 5, ln. 1-5]. The databases compiled by myself and the other members of plaintiffs' study team are the most comprehensive and powerful tools available for assessing the biological affinities of Kennewick Man [pg. 5, ln. 19-21].	C. Brace G. Gill R Jantz D. Owsley

F. Affidavit of Richard L. Jantz - July 14, 1999 (Faxed Court Document - pg. 1-5)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Independent Assessment	I [R. Jantz] understand that defendants have stated that their study team's data will be made available to other researchers at some point in the future. Such a release of data should be made, but it is not a substitute for examination of the skeleton by myself and other researchers. To suggest that the government's data can satisfy the needs of all scientists is contrary to the principles of good science. Proper scientific inquiry requires independent assessment of all data and conclusions. Without such independent assessment, there can be no confidence in the reliability of data or in the interpretations reached by a scientist [pg. 4, ln. 16-23]. Evaluation of the Kennewick skeleton by myself and other researchers is essential to ensure that the primary data is corrected and that all relevant perspectives have been obtained [pg. 4, ln. 26 and pg. 5, ln. 1].	R. Jantz Other Researchers

G. Affidavit of Douglas Owsley – July 16, 2000 (Faxed Court Document – pg.)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Independent Examination	I am pleased that the government has finally abandoned its opposition to scientific analysis of this important discovery. I am pleased that the government has begun the process of studying the skeleton. However, the limited studies conducted to date by the government are only a small part of what needs to be done. The government's studies will not provide all of the data needed to answer the many important questions that should be asked of this skeleton, and they are not an adequate substitute for independent examination of the skeleton by the plaintiffs (and by other interested scientists as well) [pg. 3, ln. 16-21]. … [I]t is a basic tenet of science that all data should be subject to testing and re-verification by independent observers. Independent verification of data is essential for ensuring the reliability and credibility of the scientific process [pg. 4, ln. 4-6].	Plaintiffs Other interested scientists
2. Metric Measurements & Discrete Trait Analysis	The examination protocol developed by Dr. Jantz and myself [D. Owsley] involves 78 different measurements (not including teeth) of those skulls (like Kennewick Man) that are complete enough for a full set of measurements. Some of these measurements are not normally taken by Dr. Powell or other researchers. Even if Dr. Powell did take our [R. Jantz and D. Owsley] (or some of them), the skeleton should still be re-examined by someone familiar with our techniques and forms. Kennewick Man is a key individual. As such, it is important that the measurements be consistent with our standardized protocols so we can ensure the integrity and reliability of our data and analyses [pg. 3, ln. 23-26 and pg. 4, ln. 1-3].	D. Owsley R. Jantz
3. Health & Lifestyle Information	… [T]he database developed by Dr. Jantz and myself also contains information concerning the health and lifestyles of the skeletons we examine. Among other things, we record information on: age at time of death; sex; dental health; general robusticity; traumatic injuries; disease (e.g., arthritis, infections); muscular development; and evidence of repetitive activities [pg. 4, ln. 6-10]. To ensure consistency of observations, all health and lifestyles information entered into our database for key skeletons like Kennewick Man is gathered by myself or someone trained in my scoring techniques [pg. 5, ln. 9-11].	D. Owsley R. Jantz Assistant
4. CAT Scans / Imaging for Projectile Point Analysis	I understand that Dr. Fagan has stated that the CAT scans taken of the projectile point in February were too unclear for interpretation. As a result, he was reportedly unable to identify the projectile point's form or type. The Smithsonian has access to a research CAT scanning facility that takes images which are more precise than the images needed for most medical applications on living individuals. This facility has been tested on projectile points embedded in human bone, and the result is a clear, three dimensional model that is detailed enough to show flaking techniques and edge serrations. With this facility, the projectile point in the skeleton's hip can be examined without removing it from the bone. The image it would take would provide a valuable record of the projectile point that could be used for future reference by other researchers, and the process would not injure the skeleton in any way [pg. 5, ln. 20-26 and pg. 6, ln. 1-5].	Smithsonian Institution Other CAT facility
5. Taphonomic Assessment	Taphonomic assessments of a skeleton's origins, deposition and post-depositional history can be complex, and these complexities are increased when as in this case the skeleton has been moved from its original depositional context. Among other things, the skeleton must be examined for possible differences in the preservation or condition of different bones, differences in the sediments adhering to (or inside) different bones, subtle erosion patterns on the bones, etching by roots, and other clues of this nature. In addition, thorough analysis of the geologic processes that acted on the discovery site during and after the time of of deposition will be necessary [pg. 6, ln. 12-22].	D. Owsley Bonnichsen Gill Stafford

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
6. Skeletal Reconstruction	Reconstruction of fragmented skeletal remains is a complex process, and subtle misjudgments can have significant consequences for the accuracy of any measurements that are obtained. I have seen the Kennewick skeleton, and its reconstruction is a task requiring special expertise [pg. 6, ln. 25-26 and pg. 7, ln. 1-4]	David Hunt
7. Image Record	Development of an accurate and suitable image record is an important part of the documentation that needs to be obtained for this skeleton. To be useful to future researchers, the image record must be free of distortion, standardized and as comprehensive as possible. My Smithsonian study team includes Roy ("Chip") Clark who is a specialist in the photography of skeletal remains. Skeletal remains are customarily rephotographed whenever they are reconstructed by a new study team in order to maintain an accurate record of the new reconstruction [pg. 7, ln. 5-20].	Roy ("Chip") Clark

NOTE: I still believe that all of the studies and tests described in Plaintiff Motion for Order Granting Access to Study should be allowed, and I am confident that all of the other plaintiffs share the same opinion. Those studies and tests represent the minimum procedures that should be conducted on this remarkable individual from the past [pg. 8, ln. 14-16].

VIII. Letter from Alan Schneider regarding radiocarbon experts and laboratories with supporting affidavits – August 18, 1999 (Faxed Copy).

A. Affidavit of C. Vance Haynes, Jr. – August 4, 1999 (Faxed Court Document - pg. 1-4)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Radiocarbon Tests	… it is essential that additional radiocarbon tests be performed on the Kennewick skeleton to confirm its geologic age [pg. 2, ln. 14-15]. A few (3-5) high quality, radiocarbon measurements have far stronger data value than do numerous less reliable measurements made under nonoptimal conditions [pg. 4, ln. 8-9].	R. E. Taylor Thomas Stafford

B. Affidavit of Thomas W. Stafford, Jr. – August 12, 1999 (Faxed Court Document - pg. 1-8)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. AMS Radiocarbon Tests	If the skeleton is redated, the new measurments should be obtained by using accelerator mass spectrometry ("AMS") counting techniques [pg. 2, ln. 15-16]. Any radiocarbon laboratory used for readating the skeleton should be a research grade facility that is experienced in the intricacies of bone dating [pg. 2, ln. 21-22].	UCR Radiocarbon Laboratory R. E. Taylor Oxford AMS Radiocarbon Facility

- The redating process should include at a <u>minimum</u> the following procedures [pg. 3, ln. 13-25]:

a. At least two different radiocarbon laboratories should be used for redating the skeleton (three would be optimal).
b. The bone used for redating Kennewick Man should be selected personally by one of the radiocarbon geochemists. This decision should be made in the presence of the skeleton and in consultation with a physical anthropologist who is experienced in multidisciplinary assessment of ancient skeletal remains. The radiocarbon laboratories should not receive the bone second-hand.
c. Each of the laboratories should date subsamples from the same bone fragment.
d. The bone material to be dated should be chemically purified to remove all possible contaminants.

- To ensure that the Kennewick skeleton is dated as accurately as possible, at least one of the bone samples should be dated using the procedures described below. These procedures will provide the controls needed to assess the accuracy of the various dates obtained during the redating process [pg. 4, ln. 11-26 and pg. 5, ln. 1-26]:

a. Approximately one to two milligrams of bone should be used to conduct a CHN (i.e., carbon-hydrogen-nitrogen) analysis. This analysis will establish the maximum amount of bone protein present in the sample being tested, and in turn will simultaneously determine the amount of bone needed for radiocarbon dating.
b. One to two milligrams of bone should be used to perform a quantitative amino acid analysis that measures the quantity and proportions of both primary and secondary amino acids in the bone. This analysis will provide a conclusive assessment of the level of geochemical preservation of the protein in the bone (i.e., how stable is the bone for radiocarbon dating).
c. The bone sample should be chemically purified to sequentially produce the following chemical fractions: (1) decalcified collagen; (2) KOH extracted collagen; and (3) gelatin. Each of these different fractions should be radiocarbon dated to monitor how rapidly and thoroughly foreign carbon contaminants are being removed during chemical purification.
d. Chemical purification should continue until a fraction known as "XAD-purified hydrolyzed collagen," or a comparable fraction, has been obtained. This chemical fraction should also be radiocarbon dated (in addition to the three fractions described in the preceding paragraph).
e. If purification problems persist, individual bone amino acids should be chemically isolated from the XAD-purified fraction. Five different amino acids should then be dated individually. The separate radiocarbon measurements obtained from these amino acids can then be compared with one another (and with those from the four proceeding chemical fractions) determine if the purification process produced chemically pure isolates that were free of foreign contamination.

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)

f. The effectiveness of chemical purification should be tested by using the same purification protocols on a sample background or "control" fossil bone that has a nearly identical mass to the Kennewick bone sample. Age measurements on backgounds will determine whether or not modern carbon was incorporated into the samples during chemical purification.
g. In addition, known-age and infinitely-old chemical compounds (such as synthetic alanine and geologically-derived graphite or coal) should be tested during the dating process. These tests help to monitor for possible sources of error following chemical purification that would not be detectable by the control-bone tests.

- The radiocarbon process should do more than merely state the date (or dates) obtained and the general dating method used. Each report should also provide sufficient data so that other scientists can independently judge the accuracy of the new age estimate(s). Among other things, the reports should include the following information (where pertinent to the procedures conducted):

a. Comprehensive data should be recorded concerning the bone specimen's initial physical characteristics (e.g., mass, color, density, dimensions, etc.) possible geochemical changes experienced prior to recovery, and any post-recovery modifications that may have occurred during stabilization and curation. Such data are essential for reconstructing postmortem alterations that could affect the age of measurement.
b. General and close-up photographs should be taken to help document the specimen's physical characteristics and to provide additional "chain-of-custody" evidence.
c. The quantity of bone used for the initial chemical assessments and the results of those assessments should be provided. Such data should include total CHN content and quantitative amino acid analyses (for both primary and secondary amino acids).
d. A description should be given of the exact chemical steps used during purification. In order to accommodate the particular idiosyncrasies of each fossil bone, the actual chemical processes used to date the bone will inevitably vary slightly from standard, published procedures. These variations from the norm must be recorded to provide baseline data for assessing the age dating results.
e. Quantitative data should be given for the results of each step in the chemical purification process. Such data include the mass bone used, yields for each chemical fraction, and yields for each amino acid isolate. Observations should also be recorded for each chemical fraction's physical characteristics (e.g., color, density, etc.) after each step in chemical purification.
f. Data should be provided for each control test conducted. Such data should include a description of the control material used and the results obtained for each test.
g. The results of the radiocarbon measurements obtained from each chemical fraction (and from each amino acid that is tested) should be provided. The report should also describe the assumptions used to reconcile any discrepancies among these different measurements.
h. Both measured and corrected radiocarbon ages should be given. Adjustments that should be made include those for isotopic fractionation (i.e., delta 13C), diet effects, and calendar calibrations. Justification for each adjustment should be given.

C. Affidavit of R. E. Taylor – August 17, 1999 (Faxed Court Document - pg. 1-7)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. AMS Radiocarbon Tests	If the Kennewick skeleton is redated, the following conditions should be kept in mind [pg. 4, ln. 17-26; pg. 5, ln. 1-26; and pg. 6, ln. 1-10]:	Oxford University Timothy Jull Thomas Stafford UCR Laboratory

a. Since the degree of bone collagen preservation can vary from bone to bone even within the same skeleton, it would be advisable to test at least two different bones.
b. Redating the skeleton should involved the use of two different radiocarbon laboratories to carry out the chemical phases of the dating process, and their samples should be measured for C14 values at two different accelerator facilities.
c. The radiocarbon laboratories used for redating the skeleton should be specialists in bone dating.
d. The bone samples to be tested should be split physically (i.e., separated into two or more equal portions) so each radiocarbon laboratory will be dating the same bones as the other laboratory.
e. The bones to be dated should be selected by the radiocarbon specialists who will conduct the dating tests.
f. It is also important to avoid using any bones that maybe needed for other purposes (such as skeletal measurements, determination of age at time of death, lifestyle studies, DNA testing, etc.). Consequently, sample selection should involve the input from specialists familiar with all of the different studies and tests that may be needed of the skeleton.
g. The bones to be dated should be sent intact to one of the radiocarbon laboratories so the needed samples can be extracted by the laboratory. In the alternative, if the samples are removed at the Burke Museum, their extraction should be supervised by one of the dating specialists.
h. AMS techniques should be used for dating the skeleton.

IX. Letter from Alan Schneider regarding DNA experts and DNA testing with supporting affidavits – January 25, 2000 (Faxed Copy).

A. Affidavit of Theodore G. Schurr – January 21, 2000 (Faxed Court Document - pg. 1-11)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. DNA Testing		No Names Provided.

- If DNA testing of the [Kennewick] skeleton is permitted, the testing protocol should be designed to obtain as much information as possible. In this regard, I recommend that, at a minimum, the following tests should be performed [pg. 6, ln. 19-26 and pg. 7, ln. 1-26]:

a. The mtDNA (mitochondrial) from the skeleton should be subjected to restriction fragment length polymorphism (or "RFLP") analysis. This method determines the extent to which the mtDNAs of different individuals are the same or dissimilar at certain discrete locations (called "recognition sites") in their sequences of nucleotide bases. To date, the only haplogroups found in modern New World populations that are thought to predate European conact are haplogroups A, B, C, D, and X. Consequently, Kennewick Man's mtDNA should be screened for the RFLPs that define these haplogroups. If none of them are detected, then the skeleton should be tested for RFLPs which define other known Asian haplogroups.
b. DNA testing of the skeleton should also include the direct sequencing of at least the first hypervariable segment ("HVS-I") of the mtDNA control region ("CR").
c. DNA testing of the skeleton should also include an attempt to define its Y-chromosome haplogroup, or paternal lineage.

NOTE: Analyzing ancient DNA is more complicated than analyzing modern DNA. Ancient DNA is usually degraded (i.e., broken into many small segments) because of normal processes of deterioration in the skeleton, and sometimes because of post-mortem environmental conditions. As a result, extraction and PCR amplification (replication) of these fragments can be difficult. In addition, special care must be taken during the analysis to avoid contamination by DNA from modern sources. Consequently, the testing of the Kennewick skeleton should be conducted by scientists experienced in the unique challenges presented by ancient DNA research. To ensure the reliability of the data obtained, samples from the skeleton should be tested by at least two different laboratories, much as was done with the recently analyzed Neanderthal skeleton.

- Equally critical is the process used for the analysis of the test results. Some of the relevant consideration in this regard include the following [pg. 8, ln. 11-26 and pg. 9, ln. 1-4]:

a. The evaluation and interpretation of the test results should be conducted by scientists who are familiar with both ancient human DNA research and First American issues.
b. The test results should be compared to all relevant published DNA data. Such data should include mtDNA and Y chromosome data for both modern and prehistoric New World native populations, and for relevant groups in Asia and elsewhere in the world. In addition, analyses should be requested form researchers who have databases of unpublished DNA information.
c. Since one purpose of this process is to determine if the skeleton can be [culturally] affiliated to any of the tribes that have claimed it, a special effort should be made to obtain comparative data specific to those tribes. Without such data, any decision upholding their claims would lack an adequate factual foundation. Accordingly, the claiming tribes should be asked if their members will provide blood or bucchal (cheek) cell samples for DNA testing. If they will not, then it may be possible to obtain DNA samples for these tribes from skeletal or other biological materials held in archaeological collections.

B. Affidavit of David Glenn Smith – February 1, 2000 (Faxed Court Document - pg. 1-7)

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
DNA Testing	Extraction and amplification of ancient DNA is a complex process that involves special challenges not normally encountered in work with modern DNA. Consequently, if DNA testing of the Kennewick skeleton is now permitted, the tests should be performed by scientists experienced in the unique problems presented by ancient DNA. Separate tests should be performed by scientists experienced in the unique problems presented by ancient DNA. Separate tests should be performed by at least two different laboratories to provide independent verification of the results obtained [pg. 3, ln. 13-17].	D. G. Smith – resume testing of right metacarpal submitted to UC-Davis in 1996. Laboratories experienced with ancient DNA

- If DNA testing of the skeleton is resumed, the following tests should be conducted [pg. 3, ln. 18-25 and pg. 4, ln. 1-16]:

a. Restriction fragment length polymorphism ("RFLP") tests should be conducted for mitochondrial DNA ("mtDNA") haplogroups A, B, C, D, and X. Some prehistoric New World skeletons have not shown any of those haplogroups. If that should prove to be the case with the Kennewick skeleton, RFLP tests should be conducted for mtDNA haplogroups F, G, Y and Z which are other common haplogroups in East Asian populations. If these are not found, the bone samples should be tested for the presence of mtDNA haplogroups that are characteristic of other geographic areas.
b. In addition to haplogroup testing, the hypervariable segments (HVS-I and HVS-II) of the control region of the mtDNA should be sequenced. In addition to confirming the haplogroup identification of the bone samples, direct sequencing of these segments provides more detailed data for determining genetic relationships than are provided by haplogroup testing alone. Such mtDNA sequence data might provide information useful for assessing the population affinities of the Kennewick skeleton.
c. If the mtDNA tests do not exhaust the bone samples and if the bone appears suitable, tests for Y chromosome DNA polymorphisms should be attempted.

NOTE: In addition, I [D.G. Smith] would like to have one tooth from the skeleton for DNA extraction and analysis. The DNA inside a tooth may be in better condition than DNA inside any of the skeleton's bones, and if so, would provide an excellent source of comparative data.

- If new samples are taken from the skeleton for DNA for testing, it is important that they be obtained in a careful and scientifically appropriate manner. Some of the procedures that should be followed are [pg 5, ln. 3-26 and pg. 6, ln. 1-7]:

a. The samples should be taken from bone that is not fractured, cracked, or deteriorated and that is not needed for other tests or studies. As a general rule, dense cortical bone with an unexposed interior, such as an intact carpal, usually provides the best samples. Teeth are also good candidates for DNA testing (if not fractured, calcified, needed for other studies, etc.). If a tooth or small bone (such as a carpal) is selected for testing, it should be sent intact to the DNA laboratory so the sample material to be used for testing cab be extracted there. DNA testing of a tooth would require the use of material from only the interior part of the tooth.
b. Before any samples are collected from a bone, the bone should be tested to determine the integrity of the bone proteins. Such testing will give a fairly reliable indicator of whether the bone is suitable for DNA extraction. It will also help to determine how much of that particular bone is needed for DNA testing so the size of the sample to be taken can be minimized.
c. Provided it is obtained from dense cortical bone that is in good condition, a sample of two to three grams of bone (per laboratory) should be adequate for all needed DNA tests. If possible, one tooth should also be sent to each laboratory for comparative testing.
d. The samples should be taken by individuals who are experienced in collecting ancient bone samples for DNA testing. The sampling process should be supervised by a research-level physical anthropologist who is familiar with all of the studies and tests normally conducted on ancient human skeletal remains. Such supervision is important to help ensure that the samples are not obtained from a bone needed for other purposes.
e. Appropriate precautions should be taken to avoid contaminating the samples with modern or other extraneous DNA. Because of the risks of contamination, only individuals experienced in ancient DNA research and in implementation of the precautions needed to minimize contamination should be involved in selection and extraction of the bone samples.
f. All of the steps involved in selection, extraction and analysis of the samples should be documented in detail. Documentation should include a complete photographic record.

X. Plaintiffs' April 1, 2000 Status Report (Faxed Copy – pg 1-22).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
Taphonomic Evaluation	[A] complete taphonomic evaluation of the skeleton should be conducted before any samples are taken [for] DNA testing. … [S]uch an evaluation will require a number of different experts, including specialists in physical anthropology, geoarchaeology, bone fracture analysis, bone taphonomy, photography and digital imaging. These experts should be experienced in working with skeletal remains as old as the Kennewick skeleton.	Experienced Team

XI. Letter from Paula A. Barran regarding DOI's proposed DNA investigation of the Kennewick human remains – April 5, 2000 (Faxed Copy – pg 1-4).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
Taphonomy	"… an appropriate taphonomic evaluation of the skeleton will require an integrated team representing multiple areas of expertise. Confining the team to one or possibly two physical anthropologists is woefully short of the necessary skill set" [pg. 2, par. 1]. "All data obtained from the original study should be reexamined as part of the taphonomic evaluation. That process is critical to the validity of the results" [pg. 2 par. 2]. The presence or absence of red ocher should be verified. "As you [DOI / DOJ] are aware, this is an area of controversy and since certain conclusions have been drawn from the supposed existence of red ocher, confirmation is necessary" [pg. 2, par. 6]. "No further sediments should be removed until a complete taphonomic analysis has been performed" [pg. 3, par. 1].	Expert Team
Rearticulation	"The skeleton should be reassembled by individuals experienced in the taphonomy of ancient skeletal remains" [pg. 2, par. 2].	Expert
Metric Analyses (Verification)	"We assume that 'checking and verifying' [from proposed DNA study] the Powell and Rose observations includes re-measuring the cranium and post-cranial skeleton. If not, those tasks should be included" [pg. 2 par. 4].	
Imaging	"Digital imaging should be conducted as part of the taphonomy" [pg. 2, par. 5].	
Sampling (DNA/Amino Acid)	"The initial sampling should be of small quantities of bone to be removed for amino acid analysis. Because a physical examination cannot determine DNA content, the sampling process should be preceded by a taphonomic analysis and then be undertaken in two stages – the first to remove samples for amino acid analysis which will determine the content of collagen and by proxy the maximum amount of DNA present in the bone sample" [pg. 2, par. 7].	
Teeth	"Teeth should not be removed from the maxilla or the mandible for DNA testing because the risk of damage is far too great" [pg. 3, par. 4]	

XII. Federal Defendants' Submission of Work Plan for DNA Analysis– April 10, 2000 (Faxed Copy).

Exhibit 2, Attachment 1 – JCR Notes of 3/23/00 Conference Call (Faxed Copy – pg. 1-5).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. DNA Testing	**Dr. Owsley** – Yes, I support the need for DNA testing. But based upon the findings presented in the Powell/Rose report [February 26 – March 1, 1999], we will need additional data collected from the skeleton.	
2. Metric Measurements	**Dr. Owsley** – I have major concerns about the Powell/Rose [February 26 – March 1, 1999] findings. I like both of them and generally respect their work. We have also avoided saying anything because of Joe's [Powell] illness. However, we could easily attack their work on this skeleton. They don't understand how to utilize "Howells" measurement database. For example, Howells' database only has 29 data groups, but the Powell/Rose report states that there are 34. Additionally, the Powell/Rose report misnamed data sets [Dr. Owsley provided an example] and made other general mistakes. Further, the Howells/Hanihara databases, used by Powell and Rose, are not the best comparative data set to use for the Kennewick skeleton. You need the Owsley/Jantz database, which has measurements for over 5,000 human remains. Some of these come from skeletons in the region of the recovery site. You need the Owsley/Jantz database if you really want to construct the true morphology of this area of study [pg.2].	
3. Imaging	**Dr. Owsley** – Also, a 3-D digitizer should be used on the skull to acquire additional information that the CT imaging might have missed [pg. 2]. **Dr. Owsley** – The 3-D digitizer can pick up details that the CT scan could have missed [pg. 3].	
4. Skeletal Reconstruction	**Dr. Owsley** – The Powell/Rose reconstruction must be confirmed through a second reconstruction and series of measurements. They have expertise, but they must be confirmed [pg. 3]. **Dr. Owsley** – I agree that the Powell/Rose work with regard to tahphonomy should be built upon. However, he stated that a reconstruction of the skeleton's major elements should be done and that measurements should be retaken to check Powell's and Rose's earlier work. Also, Powell and Rose did not take all of the measurements he would takes. This is good science – to allow confirmation [pg.3].	
5. Bone Chemical Study (Isotopic/Antibody Analysis)	**Dr. Owlsey** – Need to get at the chemical make-up of the skeleton. Tom Stafford can examine this aspect before bone samples are taken for DNA [pg. 3].	

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
6. Taphonomic Analysis	**Dr. Owsley** – Well, taphonomy is not easy. In this case, one should approach a taphonomic investigation with an experienced team. Powell and Rose collected some good information, but a lot more needs to be done and redone [Dr. Owsley gave examples regarding measurements of skeletal elements that need to be done and some that were not taken]. An in-depth taphonomic assessment needs to be redone for the Kennewick remains [positioning, staining patterns, sediments, etc.]. There needs to be a detailed reading of this skeleton. You can work out the positioning of the skeleton with expertise – how fracture patterning occurred [pg.3]. **Dr. Owsley** – For a taphonomic investigation, you need an experienced team that has handled bones. I heard that the last team did not know which bones were which. Has R. E. Taylor worked with bone before? I am deeply concerned about the sediments in and attached to the bone. **Dr. Owsley** – Yes, a taphonomy team must be good. They must have someone who can observe the sediments, their patterns, their stains, and compaction. All observable evidence should be looked at – breakage patterns, staining, etc. This team must be good in order to reconstruct the total taphonomic picture. This should be done prior to any sampling or bone extraction [pg.4]. **Dr. Owsley** – …[T]his study requires an experienced "team" and it would take longer than three (3) days. The team should include possibly three (3) people to handle the physical anthropology, one (1) geoarcheologist to deal with the sediments, and someone who is very good with taphonomy (experienced with forensics and ancient human remains). There should also be a photography team to record the bones [pg. 4]. **Dr. Owsley** – … [T]he plaintiffs' have the expertise [to conduct a taphonomic study]. Also, the team I work with is very good. Together, we have experience with ancient human remains. Can not just get a standard forensic person – it will not be easy. You should allow us [plaintiff scientists team] to acquire the data. Then you can use it to answer your questions [Native American / cultural affiliation / disposition]. Our team can apply a powerful approach. We want an archeologist also, like Dr. Stanford. Need practicing physical anthropologist who digs. Also, no one has the database that we have [pg. 4]. **Dr. Owsley** – It will take an experienced team of 5-6 people working 5-7 days, but you [defendants] will get it done – with the best data possible. This will tell you whether he is an American Indian or an Asian [pg. 5]. **Dr. Owsley** – … [Y]ou should use a team to get full set of measurements and taphonomy. Need measurements first before scraping for DNA [pg. 5].	Plaintiffs Assistant team(s)

XIII. Letter from Alan Schneider regarding DOI's DNA investigation of the Kennewick human remains – April 18, 2000 (Faxed Copy – pg 1-2).

Proposed Test	Brief Explanation	Potential Expert(s) for Test(s)
1. Taphonomic Study	We question whether defendants' study team will be able to obtain all of the taphonomic and other data needed for appropriate evaluation and analysis of the skeleton. Among other things, the team does not include specialists in all the disciplines or research areas that should be represented. In addition, it does not appear that the team will have all of the support staff and time needed to accomplish all of the tasks that should be carried out.	
2. Image Record	No description is given of what kind of image record, if any, will be made. Among other things, a digital image record should be made of the skeleton before any more bone samples are removed.	
3. Micro-Samples	We have serious reservations about the DNA Study Plan's sequencing of the procedures to be carried out. The taphonomic investigation of the skeleton should be completed, the resulting data evaluated and time allowed for follow-up examination of the skeleton, if necessary, before the micro-samples are removed. We question whether it is necessary to extract 500 milligrams (0.5 grams) of bone material for each micro-sample. 10 to 20 milligrams per micro-sample should be adequate to perform all of the needed chemical tests.	
4. DNA Testing	We note that no description is given of the methodologies and comparative data that will be used in evaluating any DNA information that may be obtained from the skeleton. Because of their importance to any inferences that may be reached concerning the skeleton's population affinities, full details of such matters should be included in the DNA study plan. We do not support the removal of any teeth that are still attached to the mandible or maxilla. If attached teeth are selected for DNA testing, the samples to be tested should be removed from the teeth in situ.	

NOTE: Further information concerning the procedures that plaintiffs would recommend for examination, sampling and DNA analyses of the skeleton can be found in Paula Barran's letter of April 5, 2000, the teleconferences with Lt. Col. Curtis and Dr. McManamon, and the other materials that have been sent to the defendants or filed with the Court over the course of this case.

2.) Department of the Interior's initiated studies:

I. Experts' Reports on the Examination of the Kennewick Remains Resulting From First non-Destructive Analysis Conducted Between February 25 and March 1, 1999. See <http://www.cr.nps.gov/aad/kennewick/>.

A. Report on the Osteological Assessment of the "Kennewick Man" Skeleton (CENWW.97.Kennewick), by Joseph F. Powell and Jerome C. Rose – March 31, 1999 (Expert Report – Pages 1-55).

Conducted Procedures and Tests	Brief Explanation
1. Inventory of the Skeletal Remains:	"On 25 February, 1999, Joseph Powell and Jerome Rose checked the *Standards* (Buikstra and Ubelaker 1994) inventory prepared by Douglas Owsley for accuracy. Several changes were made, including altering the completeness scores for some bones, moving several bones from one side of the body to another, changing the numbers (L2 vs. L4) of two lumbar vertebrae, and removing one fragment of maxilla from the faunal collection from the site…. These changes were also made on the collections inventory maintained by the Collections Office of the U.S. Army Corps of Engineers" [pg1, ln. 1-8].
2. Skeletal Reconstruction Methods:	"Because many of the cranial and postcranial elements were fragmentary and covered with calcium carbonate deposits, it was necessary to refit some broken pieces in order to collect needed metric data from these elements. …[W]e elected to refit postcranial elements and maintain the stability of fragments by hand. This procedure could not be followed for the measurements of the cranium, since the anatomically correct three-dimensional positioning of fragments is crucial for dimensional accuracy. …Cranial pieces were refit using a conservationally stable wax material applied across joint surfaces and to the exposed internal sinus areas in the maxillae. No wax was used between joints, and all fragments fit snugly and in their proper anatomical alignment. …Several times during the reconstruction process, pieces were removed, refit, and reattached to provide the best possible alignment of fragments. The anatomical accuracy of the reconstruction was checked at each stage by Powell, and the completed reconstruction was examined by Rose [pg. 3, ln. 9-25; pg. 4, ln. 1-6]. "Prior to reconstruction of the cranium, all individual pieces of maxilla, mandible, zygomatics, and the neurocranium were measured by Powell" [pg. 3, ln. 26; pg. 4, ln. 1].
3. Materials and Methods:	The following materials and methods were utilized by Powell and Rose during their examination of the Kennewick Remains: **(a)** "The inventory and analysis followed the *Standards for Data Collection from Human Skeletal Remains* edited by Buikstra and Ubelaker (1994). Additional cranial, postcranial, and dental data were collected following methods outlined in Brace and Hunt (1990), Turner and coworkers (1992), Holiday (1997), Gill and Rhine (1990), Bass (1989), Martin and Saller (1958), and Powell (1995)" [pg. 4, ln. 13-17]. **(b)** "Raw comparative data for prehistoric and modern populations were obtained from Howells (1989) and from data… provided by Dr. Hanihara, University of Tokyo. These two databases represent world-wide Holocene craniometric variation for 330 populations (N=8,833). These two databases use slightly different measuring systems; as a result, only those dimensions common to both were used for the analysis of the Hanihara data. Finally, craniometric data for 13 North American Archaic populations (N=304), dated 8,000 yr B.P. to 1,900 yr B.P., were used in conjunction with a subset of the Howells and Hanihara modern world data. Comparative data for the Gill (1986) and Brace and Hunt (1990) measurement systems were unavailable" [pg. 4, ln. 21-25; pg. 5, ln. 1-5]. **(c)** "Raw odontometric data for 14 samples (N=869) representing prehistoric and modern world-wide dental variation were obtained from Wolpoff (1972) and from Powell (1995)" [pg. 5, ln. 5-7]. **(d)** "Postcranial data for modern humans in Asia, Africa, Europe, and the Americas were… provided by Dr. Trenton Holiday, Tulane University (Holiday 1997)" [pg. 5, ln. 7-9]. **(e)** "Discrete dental and cranial comparative data were compiled from Turner (1985, 1990) and from summary data compiled in deStefano and Hauser (1989) and Ossenberg (1994)" [pg. 5, ln. 10-11].

(f) "Ostoemetric and odontometric data were collected using a variety of calipers, including standard sliding and spreading calipers (GPM), a coordinate caliper (GPM), a simometer (modified by G. Gill), and Mitutotyo digital calipers (with both blunt and pointed tips). Long bone lengths were recorded using an osteometric board constructed on 1mm graph paper… and free-moving uprights, as well as with a large pair of digital calipers. Prior to each metric data recording session, all calipers were checked for accuracy using a GPM calibration rod scaled from 10mm to 150mm" [pg. 5, ln. 12-19].

(g) "Dental discrete traits were scored following Turner et al. (1990), using both the ASU Dental Anthropology System and written descriptions for comparison" [pg. 5, ln. 19-21].

(h) "Cranial discrete traits were scored using descriptions in Buikstra and Ubelaker (1994), as well as illustrations in deStefano and Hauser (1989)" [pg. 5, ln. 21-22].

(i) "Dr. James Chatters… allowed Powell… to examine and measure a secondary cast of Dr. Chatter's reconstruction of the Kennewick skull. These data provided a useful comparison for measurements taken on the original specimen, as well as a check on interobserver error" [pg. 5, ln. 26-27; pg. 6, ln. 1-3].

(j) "… 21 measurements were repeated on the original Kennewick specimen to determine the differences between the February 28 and March 1 reconstructions" [pg. 6, ln. 3-5].

(k) "… [C]omparative craniometric data were tested for univariate and multivariate normality, and outliers were trimmed using a SAS macrolanguage program. Other variables exhibiting univariate nonnormality after trimming were excluded from further consideration, leaving 52 Howells variables and an additional 28 dimensions from the Brace and Hunt (1990), Bass (1989), and Gill (1986) measurement sets…. From these basic dimensions, others were deleted due to intra- or inter-observer error greater than 1.1mm" [pg. 6, ln. 17-24].

(l) "After deleting all female observations and those with missing values, the craniometric and odotometric data were adjusted for size differences following Darroch and Mossiman (1985)" [pg. 7. ln. 7-9].

(m) "Thirty-one of the 34 Howells populations were used in craniometric analyses…. Size-corrected data were employed in principal components analysis, canonical variates analysis, and discriminant function analysis" [pg, 7, ln. 9-13].

(n) "Mahalanobis generalized distance, D^2, was used to construct a typicality probability following Albrecht (1992) and Van Vark and Schaafsma (1992)" [pg. 7, ln 24-26].

(o) "Following Van Vark and Schaafsma (1991), the principal component scores were also used to generate inter-individuals distances as a means of determining to which population in the PCA ordination the Kennewick remains were most proximate in multivariate space" [pg. 8, ln. 3-6].

(p) "Four main variable sets were derived from the full Howells variables including:

1. the 52 primary dimensions (after removal of nonnormal data and variables that could not be observed in Kennewick).
2. a set of 49 variables with low intraobserver error.
3. Forty-five variables exhibiting low intra- and interobserver error
4. Thirty-five dimensions that had low error and that could be obtained without reconstruction of the cranium.

Although all variable sets produced generally similar multivariate results, on the analyses of the 52, 45, and 33 variable sets are presented… [pg. 6, ln. 25-26; pg. 7, ln 1-7].

Conducted Procedures and Tests	Brief Explanation
4. Biological Affinity:	"Determinations of biological affinity were made both objective and subjective approaches. In the former case, multivariate analyses were used to generate probabilities of group membership, while in the latter case comparisons were made to known patterns of discrete morphological variation among extant forensic samples in the U.S.… We [Powell and Rose] derived the following hypothesis [pg. 20, ln. 10-24]: (a) Kennewick represents an individual drawn from a population of recent (late Holocene) Native Americans. (b) Kennewick represents an individual drawn from some other recent (late Holocene) population. "The method for examining these hypotheses is drawn from logical empiricism (Popper 1968), so that any null hypothesis can only be rejected, but can never be proven to be true. It may be possible to exclude Kennewick from membership in the Native American comparative samples used in the following analyses, but it is not possible to prove that Kennewick is, in fact Native American (i.e., prove the null hypothesis to be true) [pg. 21, ln. 1-6]. [Additionally,] "[h]uman skeletons from the middle and late Archaic periods (8,000 – 1,900 yr B.P.) represent the temporally adjacent sample for comparison with Kennewick, for testing the following hypotheses" [pg. 22, ln. 19-24]: (c) Kennewick represents an individual drawn from a population of Archaic (middle Holocene) Native Americans. (d) Kennewick represents an individual drawn from a recent (late Holocene) population in the Old or New World. "This set of hypothesis allowed us to examine the possibility that the remains are unlike modern American Indians, yet similar to temporally adjacent Archaic populations in the New World. To test the [this] null hypothesis, we collected craniometric data fro 13 skeletal series dating to the Archaic period (8,000 – 1,900 yr B.P.) in North America" [pg. 22, ln. 25; pg 23, ln. 1-3].
5. Craniometric Analysis:	"The first analysis of craniometric data utilized the primary variable set of 52 dimensions…"[pg. 23, ln. 1-12]. "Because the Howells (1989) data contain only three Native American populations, the potential biological affinity, or lack thereof, between Kennewick and recent American Indians cannot be fully assessed without addition of other American Indian samples. A larger comparative data set for world-wide populations, … provided by Dr. T. Hanihara…, was used to examine the relationship between Kennewick and late Holocene populations in North and South America. This data set, which contains 48 cranial dimensions for 296 populations (N = 6,310 individuals), was used to generate both principal components and discriminant scores for the Kennewick remains…. Due to missing data for many of the observations, only 183 populations (N = 4,179) were used for comparison, including 19 North and South American populations. Prehistoric groups from the states of Washington and Oregon were included, as were populations from Alaska and British Columbia" [pg. 25, ln. 9-25]. "Because sample sizes for some Archaic reference data were small, we utilized the pooled within-group covariance matrix derived from eight modern regional samples to calculate Mahalanbias distances for Kennewick and all Archaic populations, following the suggestion of Jantz and Owsley (1998). This avoided the possibility that the small Archaic sample would also skew the results" [pg. 29, ln. 5-9]. "In addition to multivariate craniometric analysis, we also performed a set of bivariate analyses that utilize naso-orbital indices derived by Gill (1984) for discriminating American Whites from Plains Indians and American Blacks" [pg. 29, ln. 25-27].
6. Dental Anthropology:	"The teeth are all present except the right maxillary third left mandibular third molars" [pg. 9, ln. 1-2]. "Dental discrete traits were difficult to observe given the considerable attrition of the dentition" [pg. 10, ln. 4-5]. Odontometric Analyses: "Because of excessive dental wear, maximum crown diameter data for Kennewick were limited to seven buccolingual crown diameters…. However, because of large numbers of missing variables, only seven of the 14 Wolpoff (1972) samples (N=42) could be used. These data were employed in principal components and discriminant analysis procedures" [pg. 30, ln. 8-13].

Conducted Procedures and Tests	Brief Explanation
7. Discrete Trait Analysis (Dental/Skeletal):	"Cranial and dental discrete traits presented a difficulty in analysis. These features could only be scored as "present" or "absent" in Kennewick, while they are recorded as a percentage of "presence" or "absence" in comparative samples. In order to statistically assess the Kennewick discrete data, we elected to follow a procedure outlined in Powell (1993) for converting frequency data to presence/absence form in statistical analyses" [pg. 30, ln. 24-25; pg. 31, ln. 1-4].
8. Anthroposcopic Trait Analysis:	"Analysis of Kennewick's craniofacial features proceeded as in other forensic cases…. Kennewick was scored for a number of anthroposcopic features, following Rhine (1990), Napoli and Birkby (1990), Gill (1990), and Brooks et al. (1990)…. The midfacial profile of Kennewick was examined following Brooks et al. (1990)" [pg. 32, ln. 1-5 and 22-23].
9. Paleopathology and Taphonomy:	An examination of the Skeleton was conducted that focused on bone damage patterns, element (bone) representation, and bone altering processes [pg. 10-19]. "To test the pattern of element recovery and damage against human remains from known taphonomic contexts, we [Powell and Rose] compared the element representation for Kennewick against five patterns observed in a taphonomic database housed at the Maxwell Museum of Anthropology…. Five patterns were compared: intentional burials, canid-scavenged remains, bear (Ursus americanus) scavenged remains, remains recovered from rivers and lakes, and remains washed ashore on river banks and beaches. Patterns of element recovery in Kennewick were compared using the two-tailed Kolmogorov-Smirnoff test" [pg. 18, ln. 10-19].
10. Stature:	"… we [Powell and Rose] elected to use the most complete set of long bones… to produce an estimate of living stature. The bones of the arm were more complete than those of the leg, and were used in a series of stature formulae specific to those elements" [pg. 19, ln. 18-21].
11. Image Record:	(a) Radiographs (X-rays) – "… 31 bone fragments were transported… to the Radiology Department of the University of Washington Medical School. Radiographs were obtained using standard clinical cassettes, film and procedures. A centimeter scale and step wedge were included in all radiographs. Good radiographs of the fine detail were not possible due to the impregnation of all bone by fine grained silt and mineral deposits…. This situation resulted in the bone being almost as radiodense as the stone point embedded in the pelvis" [pg. 1, ln. 14-21]. (b) Computerized Axial Tomography (CAT or CT) Scans – "CAT scans were also made of the point in the right pelvis, calvarium, maxill, left proximal femur, and left distal tibia. … the CAT scan data [was used] to produce a three dimensional computer model of the ilium fragment and point. Although the point and surrounding bone had almost the same radiographic appearance it was eventually possible to differentiate the bone, remove it from the digital image, and produce a three dimensional model of the embedded point" [pg. 1, ln. 21-25; pg. 2, ln. 1-2]. "One millimeter coronal "slices" were… performed via computed tomography (CT), and the resulting slices were reassembled into a three-dimensional computerized model…. The production of the CT model and availability of the three-dimensional data will allow other researchers to collect "virtual" measurements from the CT data, and should provide necessary data to create a polymer model of the skull using stereo lithography [pg. 2, ln. 14-20]. (c) 35mm Film – "The finished reconstruction (skull) was oriented in the Frankfurt horizontal plane and photographed with 35mm color print film using three dimensional scales in each photograph" [pg. 2, ln. 6-8].

B. Analysis of Sediments Associated with Human Remains Found at Columbia Park, Kennewick, WA, by Gary Huckleberry and Julie K. Stein – April 22, 1999 (Expert Report – Pages 1-62).

Conducted Procedures and Tests	Brief Explanation
1. Objectives:	"In this study, we attempt to better define the original position of the skeleton with the stream terrace at Columbia Park (herein "site") by matching sediments from the skeleton and site through a combination of physical and chemical tests. Our ability to correlate accurately the human remains with site stratigraphy relies on complete characterization of sediments from both skeleton and site" [pg. 2, ln. 23-26]. Including the objectives section, this report is divided into seven pats. Following the objectives, "we review what is presently known of the stratigraphy at Columbia Park based largely on the work of Huckleberry et al. (1998) and Wakeley et al. (1998). We then describe the sediments adhering to the skeleton. This is followed by an overview of the methods employed to sample and analyze the sediments. We then present the results of the physical and chemical analyses and our interpretations of the data. We conclude with a discussion of the implications of our results regarding the age of the skeleton and its burial history and provide suggestions for future work" [pg. 3, ln. 5-9].
2. Site Stratigraphy Described:	Description f the Columbia Park Site stratigraphy: a.) Lithostratigraphic Unit I.- "is middle to late Holocene in age (< ~ 7000 yr. B.P.) as evidenced by tephra and a few C-14 dates on shell and sediment humates. … [T]he lower part of the deposit [Unit I] is no older than 6700 yr. B.P. There are also two C-14 dates on shell from the lower and middle parts of Lithostratigraphic Unit I at CPP005 and ~CPP200 that date 6510+/- 60 yr. B.P. (Beta – 113838) and 6090 +/- 80 yr. B.P. ((Beta – 113977), respectively (Wakeley et al., 1998)" [pg. 4, ln. 18-24). b.) Lithostratigraphic Unit II – "[f]our radiocarbon ages based on organics extracted from sediment in vibracore CPC059.5 provide age estimates for Lithostratigraphic Unit II…. One sample from approximately 1.2m depth below the surface (approximately 0.5m below the top of Lithostratigraphic Unit II) dated 9010 +/- 50 yr. B.P. (WW-1626). The three other samples located at 2.5m, 3.1m, and 3.5m below the surface yielded C-14 ages of 12460 +/- 50 yr. B. P. (WW-1737), 15330 +/- 60 yr. B.P. (WW-1627), and 14560 +/- yr. B.P. (WW-1738), respectively… Of more direct significance to the skeleton is that the latest C-14 date from CPC059.5 is derived from the bottom part of the concretion-bearing stratum hypothesized to have contained the buried human remains, and that this date is similar to the [Chatters'] C-14 date for the skeleton (8410 +/- 60 yr. B.P.)…. We interpret Lithostratigraphic Unit II as a post-outburst flood deposit formed by the Columbia River during the Pleistocene-Holocene transition and continuing until just prior to the 6700 yr. B.P. Mt. Mazama eruption" [pg. 5, ln. 12-30].
3. Skeleton Sediments:	"Every skeletal specimen had some sediment adhering to its exterior or interior surface…. The marrow cavity of the long bones and ribs were filled with sediment, as was the interior surface of the cranium, and most exterior surfaces of other bones. The sediment did not cover the bone, but rather stuck to surfaces in lumps described as nodules…." [pg. 6, ln. 12-16}. "Preliminary observations of the sediment adhering to the human remains suggested that two kinds of sediments were present: 1) light-colored and hard and 2) darker-colored and friable. By far the most common sediments were contained within light gray… calcitic concretions. The concretions were discontinuously distributed over the surface of the bones…" [pg. 6, ln. 20-23].

Conducted Procedures and Tests	Brief Explanation
4. Methods:	**a.)** Sediment Removal from Skeleton – Initially, "we examined all bone specimens closely and made notations of where sediment was most copious. …The highest ranked specimens were photographed as a record of their pre-removal condition" [pg. 7, ln. 7-16]. Sediment removal was completed with the use of a "Dermel Multi-Pro[brand], 2-speed modal 285 type 5, with attachments of Dremel flex shaft (model 25T2) and multi-speed foot pedal…" [pg. 7, ln. 20-22]. "The greatest concern in removing the sediment from the specimen was to leave all bone in place. No part of the bone could be removed along with the sediment. To facilitate this, the physical anthropologists and conservator checked every sediment clump under magnification. All agreed that no bone was adhering to the sediment collected. After sediment was removed from a specimen, the bone was again photographed as a record of the changes made" [pg. 8, ln. 1-5]. **b.)** Selection of Site Sediments – "In this study, we are attempting to match sediments from the skeleton to sediments recovered at the site. Because of possible horizontal changes in stratigraphy, it is ideal to use sediments from locations closest to where the skeleton was recovered. …We selected sediment samples from stratigraphic column CPP054 and vibracore CPC059.5 for our control samples because they contained the most samples in close proximity to the skeleton recovery area. AtCPP054, Lithostratigraphic Unit I extends from 0 to 70 cm below the modern surface and is sampled at 10 cm intervals. Because we are testing the hypothesis that the skeleton was derived from the concretion zone, i.e., the upper part of Lithostratigraphic Unit II or Wakeley et al.'s (1998) Stratum IV, we analyzed all samples from the 70-130 cm depth range…. In addition we selected samples from Lithostratigraphic Unit I (Wakeley et al.'s Strata I, II, and III) and from the lower part of shore deposits from the top of core CPC054 were also analyzed" [pg. 9, ln. 21-24; pg. 10, ln. 3-13]. **c.)** Granulometry – "…analysis was performed at the WSU Pedology and Quaternary Studies Laboratory, using the same instrument (Malvern Mastersizer) used for Chatters' samples. We submitted 20 samples: 15 from the site and five from the skeleton…. Mastersizer software calculated statistical measures of the grain size distribution" [pg. 10, ln. 16-29]. **d.)** Thin-section (Micromorphology) Analysis – "During extraction of sediment from the cranium with the Dremel tool, several small aggregates (~ 1 g each) became detached, and these were submitted to the WSU [Washington State University] Pedology and Quaternary Studies Laboratory for thin sectioning…. The resulting thin-sections were then combined with selected thin-section of soil samples from the site collected by Huckleberry et al. (1998) and submitted to Paul Goldberg at Boston University, an expert in soil micromorphology in archaeological settings. Dr. Goldberg analyzed seven thin-sections, five from the Columbia Park stream-bank and two from the cranium, without knowing the provenience of the samples" [pg. 11, ln. 1-8]. **e.)** Thermogravimetric Analysis – "was selected for this study because it is an accurate measurement of both organic matter and carbonate in mineral sediment. Organic matter is oxidized at temperatures between 70 C and 550 C, and carbonate between 550 C and 1000 C. As a sediment sample heated, subtle changes in weight correspond to the organic matter and carbonate content…. Quantifying the amount of organic matter and carbonate in sediment from both skeleton and the bank sediment would therefore be useful to pinpoint the layer from which the bones originated. … a Thermogravimetric Analyzer (TGA) can make continuous measurements of weight-loss in a controlled stream of oxygen. This analyzer provides not only the weight loss from oxidation of organic matter and carbonate, but also a graphic representation of that weight loss over time. This allows for a more detailed comparison of sediment samples. Samples with similar mineralogical and organic content (i.e. from the same layer) should produce identical TGA graphs. Five representative sediment samples from the skeleton were selected for loss-on ignition and TGA analysis… to represent the different kinds of sediment observed on the skeleton. Nine samples from the discovery site were selected to represent strata described in the terrace profile. Loss-on-ignition and TGA data were derived from one procedure. Between .05 and .09 g of pulverized sediment sample was placed in a Perkin Elmer (brand) 7 Series / Unix TGA 7; Thermogravimetric Analyzer…. The machine used in this analysis was operated by Stein, under the supervision of Dr. Brian Flinn. It is housed in the Thermal Analysis Lab – Material Science and Engineering, University of Washington. The loss-on-ignition data (percent weight) was calculated by the computer using the TGA data, involving the weight of the sample before the burn, minus the weight loss at 550 C and the weight loss at 1000 C…" [pg. 11, ln. 9-31; pg. 12, ln. 1-17].

Conducted Procedures and Tests	Brief Explanation
	f.) X-ray Diffraction – "… is a technique that utilizes electromagnetic radiation in the wavelength ranges of 0.002-100 A…. When a beam of X-rays passes through a substance, it is partly scattered by the atoms of the substance. The atoms of crystalline materials are arranged in a regular fashion of repeated and regular intervals along certain rows of the crystalline structure. Thus, when a crystalline material is subjected to x-radiation, the atoms in any such row act as centers of scattered radiation, and diffracted beams are formed at certain angles depending on the period of the row…. The amount of diffraction at different incident angles of radiation can then be correlated to specific crystalline minerals. Only crystalline material can be characterized by X-ray diffraction; amorphous material (such as organic matter or tephra) does not diffract any of the beam. We selected this technique as a way to compare the crystalline mineralogical content of the skeleton and site sediment. Samples subjected to X-ray analysis were selected to cover the range of sediment types from the skeleton as well as the site samples. The data was collected by Dr. Brian Flinn and Kyle Flannigan of the Department of Materials Science and Engineering at the University of Washington who produced a report included as Appendix D…. The same five skeleton sediment samples and nine site sediment samples selected for thermogravimetric analysis were also used in the X-ray diffraction analysis…. Each sediment samples was ground in an agate mortar, placed within a sample holder, and received on hour and 13 minutes of machine time…. The diffraction signal was plotted versus the 2θ (degree)" [pg. 12, ln. 18-31; pg. 13, ln. 8-12]. **g.)** Trace-Element Analysis – "… was performed on site and skeleton sediments in order to provide further possible chemical signatures potentially useful for correlation. Given skeleton sediment sample sizes well below 1 g, we selected the inductively coupled plasma mass spectrometry (ICP-MS) method which was performed at Washington State University Geoanalytical Laboratory…. Sediment samples were ground into a fine powder using an agate mortar and pestle and dissolved in hydrofluoric, nitric, and perchloric acids. The solutions of unknown and control samples were ionized in a plasma and then passed through the mass spectrometer…. A total of 26 elements are presented… including the 14 naturally occurring rare earth elements (La through Lu) together with Ba, Rb, Y, Nb, Hf, Ta, Pb, Th, U, Sr, and Zr" [pg. 13, ln. 14-23].
5. Sediment Analyses Results:	Results from the following tests, as well as comparisons between skeleton and site sediments, were provided: (a.) Granulometry [pg. 13-16]. (b.) Micromorphology [pg. 16-17]. (c.) Thermogravimetry [pg. 17-21]. (d.) X-ray Diffraction [pg. 21-23]. (e.) Trace-Element Chemistry [pg. 23].
6. Interpretations:	Interpretations of the data generated by the five tests and the comparisons between the skeletal and site sediments are provided [pg. 23-25].
7. Conclusions and Recommendations:	Conclusions are presented and the following recommendations are proffered [pg. 25-27]: (a.) excavation of "the site adjacent to the riprap (site protective covering) to determine the stratigraphic context of the Mazama ash in the vicinity of the skeleton discovery position" [pg. 27, ln. 1-17]. (b.) determination of "what organic fraction was dated on sample WW1626 by the U.S. Geological Survey Climate History/Hazard Program C-14 Laboratory in Reston, VA" [pg. 27, ln. 17-19]. (c.) the "dating of different organic fractions from several sediment samples in the upper 50 cm of Lithostratigraphic Unit II [pg. 27, ln. 19-20]. "These analyses will improve the contextual resolution of the human remains found at Columbia Park to a point beyond what we have provided" in this report [pg 27, ln. 21-23].

C. Analysis of Lithic Artifact Embedded in the Columbia Park Remains, by John L. Fagan- April 22, 1999 (Expert Report – Pages 1-5).

Conducted Procedures and Tests	Brief Explanation
1. Objective:	"As part of the team assembled to conduct an analysis of the Columbia Park Remains, my task involved the analysis and description of the lithic artifact embedded in the human ilium. Apart from describing and documenting the artifact, my goal was to conduct a non-destructive technological analysis of the stone tool and estimate the chronological period of its use based on typological information and comparative data from archaeological sites in the Pacific Northwest" [pg. 1, ln. 1-6].
2. Visual Inspection:	"The broken portion of the ilium that contained the stone artifact (specimen 97.R.17) was approximately seven centimeters long by six centimeters wide. The interior surface of the bone had an oval opening approximately 3.5 cm. long by 1.5 cm. wide through which was visible one face of a bifacially worked basalt or andesite artifact. The opposite side of the bone had a smaller rectangular opening on the exterior surface that measured approximately 1.8 cm. long by 1.6 cm. wide, through which the opposite face of the artifact was visible…. On the exterior surface of the ilium, a thin layer of bone partially covered the stone artifact. However, a portion of the serrated edge of the stone tool was visible along the edge closest to the iliac crest, and there was a gap between the bone and the stone in this area" [pg. 1, ln. 14-25].
3. Description of the Artifact:	"Based on a visual examination and with the aid of a hand lens, the raw material used in the manufacture of the artifact is a dark gray, medium-grained volcanic stone commonly referred to as basalt. …[T]he stone artifact is glassy and exhibits good-quality flaking characteristics. The artifact is bifacial in form and has been shaped by percussion flaking. The artifact has a biconvex cross section, is relatively thin, and has been pressure flaked along the one edge that is visible. Pressure flaking techniques were used to form the serrations…. Since the artifact is surrounded by bone, it is not possible, form a visual inspection alone, to differentiate the tip from the base, or to determine if the object is notched to facilitate hafting…. Given the limitations of a visual inspection, x-rays and CT scans were conducted…" [pg. 1, ln. 34-41; pg. 2, .ln. 1-19].
4. X-rays and CT Scans:	"X-rays and CT scans were performed at the University of Washington Hospital. The x-rays provided a generalized shape of the artifact. However, due to the partial mineralization of the bone and the mineral deposits on the surface of the bone, as well as sediments in between the artifact and the bone, it was still not possible to determine which end was the tip and which was the base…. The CT scans provided much more detailed information about the size, shape, and cross section of the artifact…. Some distortions evident in the cross section images may be due to the presence of minerals in the bone and sediments between the bone and the artifact. These distortions make it difficult to obtain precise measurements of the artifact, however, the overall shape can be determined [pg. 2: 20-40].
5. Typological Assessment:	"The artifact resembles a Cascade Point in shape and cross section…. The type of raw material used in the manufacture of the tool is commonly used for the production of similar bifacial tools identified as projectile points and knives in Cascade phase assemblages…" [pg. 3, ln. 1-5].
6. Comparisons:	"In order to make an assessment of possible age of manufacture and period of use of the artifact associated with the Columbia Park Remains, …several archaeological collections at the Burke Museum at the University of Washington and at the Museum of Natural History at the University of Oregon" were examined [pg. 3, ln. 33- 39].

II. Memorandum: Determination that the Kennewick Human Skeletal Remains are "Native American" for the Purposes of the Native American Graves Protection and Repatriation Act (NAGPRA) – January 11, 2000 (Electronic Copy of the Original Memorandum located at <http://www.cr.nps.gov/kennewick/c14memo.htm> pg. 1-8)

Conducted Procedures and Tests	Brief Explanation
Radiocarbon Tests	**Summary of the Radiocarbon Results** – Four C14 dates have been reported for the samples extracted by the Department of the Interior and Corps of Engineers in September, 1999. The samples have been processed and dated by Beta Analytical, Inc. (BA), of Miami, Florida, the Radiocarbon Laboratory of the University of California at Riverside (UC-R), and the NSF-Arizona AMS Facility of the University of Arizona (UA). Two of the four new dates show a substantial conformance with the initial radiocarbon date of the portion of the metacarpal submitted by Benton County in 1996. All the carbon samples showed a very low carbon content and this has slowed the processing of the samples and extended the time required to develop our interpretation of the C14 dates [pg. 2, par. 5]. The BA date The BA date (Beta-133993) gave a conventional radiocarbon age of 8410 +/- 40 BP. The equivalent calibrated radiocarbon age (using the two sigma, 95% probability) in years BP is cal BP 9510 to 9405 and cal BP 9345 to 9320. The bone sample used for this date was approximately half of the right metatarsal, one of the load-bearing bones of the foot (Sample DOI 1a). Analysis and processing of the sample at Beta indicated that the amount of organic carbon remaining in the sample was very low. The Laboratory Director of BA, Mr. Darden Hood, reported that "the original weight of the bone was 9.1 grams. The amount of collagen extracted was 0.030 grams (30.0 mg). This relates to a percent concentration of 0.3%. The value is very low due to the high mineral content of the submitted bone. 9.5 mg. of the collagen was used for the analysis. This provided us with 3.2 mg. of carbon. The percentage of carbon is then calculated as 33.7% carbon within the collagen (Hood 1999b and Attachment 2)." Mr. Hood also reported that "by our standards, the collagen extract looked free of intrusive elements…It was vitreous in texture and golden in color as expected. It was free of visible contamination or deterioration. However, this does not preclude the presence of secondary [i.e., intrusive] environmental proteins" [pg. 2-3, par. 6]. The Radiocarbon Laboratory of the UC-R processed and dated two of the Kennewick bone samples. Like the BA sample, both of these were very low in carbon content. Due to the low carbon content and the lack of clear collagen-like characteristics of the extracted carbon, the dates were reported as "the apparent C14 ages" for each sample. One of the samples (Sample DOI 1b) was dated as 8130 +/- 40 BP (UCR-3806/CAMS-60684), slightly different from the BA date for Sample DOI 1a, but not inconsistent with it. These two samples, in fact, are from the same bone, the right first metatarsal [pg. 3, par 1]. Both of these dates (Beta-133993) and (UCR-3806/CAMS-60684) are consistent with the earlier C14 date obtained from a portion of the 5th left metacarpal. The BA date, in fact is almost identical to the first C14 date [pg. 3, par. 2]. The other UC-R date is also old, an apparent C14 age of 6940 +/- 30 BP (UCR-3806/CAMS-60683), but more recent than the other dates. This sample (Sample DOI 2b) from the left tibial crest also is more deteriorated than Sample DOI 1b. Sample DOI 2b contains only 2.3% of the carbon relative to the UC-R modern bone standard while Sample DOI 1b contains 14.3% of the modern standard [pg. 3, par. 3]. The UA laboratory dated the second subsample from the left tibial crest (Sample DOI 2a). The date they obtained is also old, 5570 +/- 100 BP (AA34818). This date is more or less consistent with the UC-R 3806/CAMS-60683 date and together they suggest that exogenous "new carbon" is pronounced in the left tibia from which these two samples were taken. The UA laboratory also reported a low carbon content for Sample DOI 2a. They recorded a carbon yield of .05 %, that is, the final mass of carbon based upon the initial mass of the bone. UA's analysis of this level of carbon content was that they could not determine the source of the carbon, i.e., whether it was inherent or exogenous [pg. 3, par. 4].

A. Attachment 1: Report of sample processing and dating. Letter from Darden Hood, Beta Analytical, Inc., to Dr. Francis P. McManamon – October 17, 1999 (Electronic Copy of the Original Report located at <http://www.cr.nps.gov/kennewick/hood.htm> pg. 1-7)

Conducted Procedures and Tests	Brief Explanation
Radiocarbon Tests	The results are reported in three formats; the Conventional Radiocarbon Age (BP) which is systematic with radiocarbon dates quoted without calendar calibration, calibrated calendar age (cal BC) which is corrected for true half life and atmospheric fluctuations and reported in calendar years, and calibrated Conventional Radiocarbon Age (cal BP), where the same half life and atmospheric fluctuation corrections are applied to provide a corrected BP format result (BP = before present, present being AD 1950). The cal BC and cal BP results are reported using the two sigma, 95% probability limitation. As noted on the report sheet, if other lines of evidence give you confidence to use the one sigma range on the calibrated results, you may use that range instead (which is listed on the hard-copy calibration print-out). In summary, the results are [pg. 2-3, par 5]: Conventional Radiocarbon Age: Calibrated Calendar Age (2 sigma): Calibration Radiocarbon Age (2 sigma): 8410 +/- 40 BP cal BC 7560 to 7455 and cal BC 7395 to 7370 cal BP 9510 to 9405 and cal BP 9345 to 9320 Also enclosed is a Quality Assurance report showing the expected and measured ages for standards and a blind measured in the AMS. As I previously mentioned, we only rely on the AMS for the measurement. The machine is provided with our own standards, blanks, and blinds, already loaded in the target holder. The machine simply makes a measurement for us, which we verify. The QA report shows the measurement of two secondary standards (TIRI wood and TIRI turbidite). These two targets are international standards, with known consensus values. The "expected values" listed on the report are those consensus values. The "**blind**" listed on the QA report is a sample which had been previously analyzed by us. The AMS facility did not know the previous result for this blind [pg. 3, par. 1]. A **photo-documentary** of the analysis is enclosed. Given the sensitivity of this analysis, each step of the analysis was carefully documented. Notes were taken by each individual involved in the analysis which consisted of myself Mr. Darden Hood, Director (20 years experience), Mr. Ronald Hatfield, Laboratory Manager (18 years experience), Mr. Christopher Patrick, Associate Manager (15 years experience), Ms. Teresa Zilko-Miller (12 years experience), Ms. Lethia Cerda, Office Coordinator (8 years experience), and Mr. David Miller, Staff (6 years experience). The sample graphite along with the necessary standards, already pressed into the target holder under our control, was sent to the AMS facility at Lawrence Livermore National Laboratory for measurement, and the result verified through our QA program [pg. 3, par. 2]. One comment on the results is the **13C/12C ratio** result. The value is elevated, indicating the individual had a C4 plant, or marine diet. Corn is the staple diet of most individuals with an elevated 13C/12C ratio. Since corn was not present 9000 years ago (to our knowledge), it suggests the likelihood of a marine diet. If this is the case, the presence of a "reservoir effect" in the diet may need to be considered. This effect may make the radiocarbon dating "too old" by some amount, perhaps by several hundred years [pg. 3, par. 3].

B. Attachment 2: Additional information regarding Beta Analytic's radiocarbon dating analysis of the Kennewick bone sample CENWW.97.R.24(Mta)/DOI1a. Letter from Darden Hood, Beta Analytical, Inc., to Dr. Francis P. McManamon – November 18, 1999 (Electronic Copy of the Original Report located at <http://www.cr.nps.gov/kennewick/hood2.htm> pg. 1-2)

Conducted Procedures and Tests	Brief Explanation
Radiocarbon Tests	The **collagen content** of the originally submitted bone includes [pg. 1]: The original weight of the bone was 9.1 grams. The amount of collagen extracted was 0.030 grains (30.0 mg). The relates to a percent concentration of 0.3%. The value is very low due to the high mineral content of the submitted bone. The **carbon concentration** within the extracted collagen includes [pg. 1]: 9.5 mg of the collagen was used for the analysis. This provided us with 3.2 mg of carbon. The percentage carbon is then calculated as 33.7% carbon within the collagen.

C. Attachment 3: Results of the UCR Radiocarbon Analysis of two Kennewick bones compared with the earlier results. Fax from R. E. Taylor, University of California at Riverside, to Dr. Francis P. McManamon – December 20, 1999 (Electronic Copy of the Original Report located at <http://www.cr.nps.gov/kennewick/taylor.htm> pg. 1-7)

Conducted Procedures and Tests	Brief Explanation
Radiocarbon Tests	Comments on the UCR 14C Results: On the basis of their amino acid carbon contents (AACC) and amino acid profiles, UCR-3806 and 3807 exhibit much lower collagen (protein) preservation than the earlier Kennewick bone my lab previously analyzed (UCR-3476). UCR-3806 has totally lost its collegen-like amino acid pattern. As I reported previously, both UCR-3806 and UCR-3807 exhibited unusual amounts of effervescence in acid which is usually an indication of significant amounts of secondary carbonates and there was unusual difficulty in filtering the hydrolysates [pg. 1, par. 1]. The AACC that I reported earlier by email has been revised in light of additional analyses. The revised AACC values do not change the fact that both bones are problematical in terms of their suitability to yield accurate bone 14C values due to their degraded biogeochemical condition. Although UCR-3807 turns out to have more protein that I reported earlier (14.3% AACC of our modern bone standard), the amino acid composition is marginal in terms of its collagen- or non-collagen like characteristics. On a routine basis, our criteria for an acceptable bone is at least 5% AACC and where the bone retains a clear collagen-like amino acid profile. On the basis of their amino acid profiles, both UCR-3806 and UCR-3807 are classified as non-collagen [pg. 1, par. 2]. Because of their biochemically degraded condition, I report the results of the 14C measurements in terms of "fraction modern" with the apparent 14C age cited in footnotes. You will also note that the reported 13C values of these two samples are not typical of collagen amino acids. I would interpret that these values reflect primarily a dietary effect--namely that the individual (assuming that there is only one individual here represented) subsisted largely on a marine diet (e.g., fish). There also could be a fractionation factor involved due to the poor protein preservation. (In the case of UCR-3476, the first Kennewick bone we ran, we also observed a depressed **13C value** and, making certain assumptions, we calculated a reservoir corrected age of 7880 (160 BP.) [pg. 1-2, par. 3] In summary, UCR-3807 exhibits an younger age offset of about 3% (about 280 14C years) in comparison with UCR-3476 while UCR-3806 is very anomalous with respect to UCR-3476. One interpretation is that the age offsets reflect varying percentages of more recent and/or modern contamination in both UCR-3806 and UCR-3607, with the percentage contribution of contamination increasing as a function of the decreasing residual collagen protein content. For UCR-3807, there is enough residual collagen so that the offset is limited to a few percent, while for UCR-3806, the very low AACC is reflected in the much more recent anomalous age [pg. 2, par. 1].

D. Attachment 4a: Carbon-isotope measurements on the Kennewick bone. Letter from Douglas Donahue, University of Arizona, to Dr. Francis P. McManamon – January 10, 2000 (Electronic Copy of the Original Report located at <http://www.cr.nps.gov/kennewick/donahue1.htm> pg. 1-3)

Conducted Procedures and Tests	Brief Explanation
Radiocarbon Tests	Attached are the results of carbon-isotope measurements on the Kennewick bone sample, which we have given the identification number AA34818, Sample B. The treatments of this sample are described in detail in my message to you of 13 December, 1999, and forwarded to you today. The sample from which the attached results were obtained is the one labeled "Sample B" in that message. I am anxious to make several comments [pg.2, par. 1]. 1.) The carbon yield for this sample was 0.05%. The yield is defined as the mass of carbon obtained after all of the treatments of the bone have completed, divided by the initial mass of bone used. 2.) This is well below the yield for which we would usually quote a result. In fact, for bones with a yield as low as this, we generally will not even make a radiocarbon measurement. 3.) Because of the unusual nature of this sample, we have indeed made a radiocarbon measurement of the carbon obtained from it, and the result of that measurement is on the attached report. 4.) I emphasize that, because of the low yield, we do not have confidence in the result. Since contamination would most probably be more recent than the bone material, we would expect that our result is a limit, and represents a minimum of the radiocarbon age.

E. Attachment 4b: Results of measurements, equipment preparation, sampling procedure, and the pretreatment procedure. Letter from Douglas Donahue, University of Arizona, to Dr. Francis P. McManamon – January 9, 2000 (Electronic Copy of the Original Report located at <http://www.cr.nps.gov/kennewick/donahue1.htm> pg. 1-3)

Conducted Procedures and Tests	Brief Explanation
Radiocarbon Tests (Equipment Preparation)	The following equipment was used to perform various stages of sample preparation: 1) a Mettler H54AR scale; 2) a drying oven; 3) a Dremel tool; 4) aluminum foil; 5) cutting blade; 6) acetone; 7) distilled water; 8) autoclave; 9) two-ended stainless steel spatula; 10) stainless steel tweezers; 11) chem wipes; 12) VWR 4x4 weighing paper; 13) agate mortar and pestle; 14) glass scintillation vials; 15) 50 ml test tubes with lids; 16) Erlenmeyer filtration flask with rubber stopper; 17) water bath; 18) exacto knife; 19) stainless steel wood carving tools [pg. 1, par. 1]. The following were cleaned with acetone, rinsed with distilled water, and loaded into the drying oven for ~30 minutes: 1) aluminum foil; 2) spatula; 3) tweezers; 4) mortar and pestle; 5) exacto knife and new blade 6) wood carving tools [pg. 1, par. 2]. After the tools had dried they were placed in a cleaned (acetone and DI-H2O rinsed) plastic tray with lid [pg. 1, par. 3]. The following were cleaned in the autoclave: 1) spatula; 2) tweezers; 3) 50 ml test tube; 4) filtration flask [pg. 1, par. 4]. After the implements were removed from the autoclave they were placed in a plastic tray with lid. After the glassware was removed it was sealed with aluminum foil and kept in zip lock bags until it was directly used [pg. 1, par. 5].
Radiocarbon Tests (Sampling Procedure)	Dr. Tim Jull cut the submitted sample, labeled AA34818, and with initial mass = 6.2 grams, into 4 individual pieces for processing. Dr. Jull wore non-powdered latex gloves and safety glasses and used a cleaned Dremel tool with diamond blade to slice the sample into 4 sub-samples. These were each placed into individual glass vials labeled A, B, C, and D. Small fragments and powder remaining from the sawing were also saved and placed into a glass vial labeled E. The masses of the samples were: Sample A, 1.29g; Sample B, 1.27g; Sample C, 1.34g; Sample D, 1.79g; Sample E, 0.5g [pg. 2, par. 1]. Of these 4 sub-samples, Jeanette O'Malley selected sample "A" with Dr. Donahue and Mitzi DeMartino watching. Ms. O'Malley also selected a portion of material from Sample E for nitrogen analysis [pg. 2, par. 2]. From sample "E ", Ms. O'Malley, wearing non-powdered latex gloves, picked out clean white flakes from scrap material on weighing paper, using cleaned tweezers. These flakes were weighed on the scale until a weight of 5.79mg of material was obtained. These flakes were then poured from the weighing paper into an agate mortar and crushed to fine powder. This powder was then placed on new weighing paper and had a total mass of 5.58mg. It was then poured into a clean glass vial with lid, labeled only with the AA number. This sample was then taken off site for nitrogen analysis at an independent, private lab, where it was determined that the sample contained 0.07% nitrogen. This is approximately a factor of ten below the nitrogen content of a bone for which we would expect to make a successful radiocarbon measurement [pg. 2, par. 3]. From sample "A", Ms. OMalley, wearing non-powdered latex gloves and dust mask, selected the largest fragment. This piece had one surface area that had been directly exposed to the environment. Thus the opposite portion of the fragment, from the interior of the bone shaft, was used for sampling. Using an exacto knife, fine flakes and powder were scraped from this interior surface. A final total of 0.63 grams was extracted [pg. 2, par. 4].

Conducted Procedures and Tests	Brief Explanation
Radiocarbon Tests (Pretreatment Procedure)	These 0.63 grams were placed in a covered test tube with 20ml of 0.25N HCl. There was a strong reaction of effervescence observed. The sample was then sonicated for 20 minutes, in 0.25N HCl, at room temperature. The solution was decanted and fresh DI water added. This rinsing process was repeated until a neutral pH was achieved. The sample appeared to be mostly fluffy powder, with a little gel [pg. 2, par. 5]. This hydrolyzed sample was then put in 20ml of 0.01N HCl in a 60 degree C waterbath overnight. The sample had little visible change the next day, so the sample was then placed in a 60 degree C sonicator bath for 2 hours. The result of this treatment was an opaque suspension [pg. 2, par. 6]. The suspension was then filtered through fiberglass filter paper and the resulting solution was decanted into a 50ml beaker and frozen. This beaker, containing the frozen liquid, was then placed on a freeze-dry apparatus overnight. The resulting solid material was a white chalky granule residue that was a bit sticky, which is NOT characteristic of collagen and indicated that a poor result would be obtained from the radiocarbon measurement [pg. 2-3, par. 7]. The sample was weighed, and had a mass of 21.8 milligrams. This material was then combusted in an oxygen atmosphere. The combusted sample yielded 0.42 milligrams of carbon, or a 1.9 % combustion yield. This low combustion yield (the combustion yield from collagen should be 35-40%) indicates that the product of the freeze-dry step contained considerable non-carbonaceous mineral material [pg. 3, par. 1]. To summarize, the overall yield, Y = carbon yield/initial bone mass = 0.42mg/0.63 grams = 0.07 percent. The entire procedure was repeated with a second portion of sample A. This portion had an initial mass of 0.38 grams, and the carbon extracted from this sample gave a yield, Y = 0.05 percent. We can make a measurement of the radiocarbon content of either of these samples, but because of the very low yields, we are hesitant to do so. We are continuing to work with Sample B, and will keep you informed of our progress.

III. Physical Examination and Taphonomic Assessment of the Kennewick Human Remains (CENWW.97.Kennewick) to Assist with DNA Sample Selection. Interim Report to the Department of Justice and the Department of the Interior by Phillip L. Walker, Clark Spencer Larsen, and Joseph Powell – May 8, 2000 (Interim Report – pg. 1-6).

Conducted Procedures and Tests	Brief Explanation
Background for Investigation	"To obtain information for use in selecting bone samples suitable for DNA analysis, we conducted a physical examination and assessment of the Kennewick human remains at the Burke Museum, Seattle, Washington, on April 25-26, 2000. Dr. Powell made some additional observations for use in this report on April 27, 2000. As part of our analysis, we examined the entire skeleton and made both macroscopic and microscopic observations of its condition" [pg. 1, par. 1]. "This is an interim report in which we present an outline of the methods we used and our preliminary conclusions. We have not yet had the opportunity to fully analyze the data we collected during our visit to the Burke Museum. However, we believe that we have sufficient information at this point to make well-informed recommendations concerning the skeletal elements that are most likely to prove useful for DNA analysis" [pg.1, par. 2].
Physical Examination and Taphonomic Assessment	"During our visit to the Burke museum we conducted macroscopic and microscopic examinations of the Kennewick skeleton to determine the suitability of specific skeletal elements for DNA analysis. As part of this work we consulted with other specialists working on the skeleton. Based work on this research, we developed a selection criteria that were used to create a ranked list of skeletal elements that should be considered for DNA analysis" [pg. 4, par 1]. "Our preliminary observations confirm the conclusion of Powell and Rose (1999) that these are the remains of a single individual who most probably was interred at the site instead of being left to decompose on the surface of the ground. This conclusion is consistent with the completeness of the skeleton and the absence of any clear indications of carnivore activity. Our final report will contain a detailed analysis of this and other issues related to the taphonomic history of the skeleton" [pg. 4, par 2].

ATTACHMENT 8

DEPARTMENT OF THE ARMY
NORTHWESTERN DIVISION, CORPS OF ENGINEERS
P.O. BOX 2870
PORTLAND, OREGON 97208-2870

Reply to
Attention of:

CENWD-NP-OC

14 September 2000

VIA FACSIMILE AND REGULAR MAIL

Mr. Jack Haugrud
Chief, General Litigation Section
United States Department of Justice
Environment and Natural Resources Division
P.O. Box 663
Washington, D.C. 20044-0663

Subject: Bonnichsen, et al., v. United States et al., (D. Oregon, Civil No. 96-1481-JE) and Asatru et al. v. Untied States, et al., (D. Oregon, Civil No. 96-1516-JE)

Dear Mr. Haugrud:

Reference is made to the above referenced litigation and the order and opinion of the Court dated June 27, 1997, which remanded the matter to the Corps of Engineers for further consideration.

As you are aware, in its remand opinion, the Court requested that the Corps, in reaching its decision on the ultimate disposition of the remains and on whether to grant plaintiffs' request for permission to study the remains, consider a series of questions posed by the Court, see Opinion at p. 45. The Corps in previous correspondence with the United States Department of the Interior has obtained the views of that agency on certain matters related to the Native American Graves Protection and Repatriation Act (NAGPRA) and raised in the questions posed by the Court, see National Park Service (NPS) letter to Donald Curtis, Jr., dated December 23, 1997.

The National Park Service did not address the Court's question regarding whether the plaintiffs have a right under the First Amendment or otherwise to study the remains (see Opinion at p. 50, and pp. 33-38). The National Park Service in their December 23, 1997 response to this question deferred to the responses that have been filed with the Court in this matter and to the views of the United States Department of Justice (see NPS letter at p. 7). Because of the emphasis placed by the Court on a response to this concern and in light of the expertise of the Department of Justice among the federal agencies in the area of constitutional law, we solicit your opinion regarding this question.

Thank your very much for your attention to this matter. Should you have any questions or need additional information please do not hesitate to contact me.

Sincerely,

Rebecca B. Ransom

Rebecca B. Ransom
Division Counsel

cc: Ms. Aimee S. Bevan

ATTACHMENT 9

U.S. Department of Justice

Environment and Natural Resources Division

Reply to:
General Litigation Section
P.O. Box 663
Washington, DC 20044-0663

Telephone (202) 305-0479
Facsimile (202) 305-0506

Via First Class Mail and Facsimile

September 19, 2000

Rebecca B. Ransom
Division Counsel
Department of the Army
Northwestern Division
Corps of Engineers
P.O. Box 2870
Portland, OR 97208-2870

Dear Ms. Ransom,

In a letter dated September 14, 2000, you requested the views of the Department of Justice on the question of whether the plaintiffs in Bonnichsen, et al., v. United States (D. Oregon, Civil No. 96-1481-JE) and Asatru et al. v. United States (D. Oregon, Civil No. 96-1516-JE) have a First Amendment right to study human remains in the temporary custody of the United States pending a determination of ownership under NAGPRA. As more fully set forth in the attached analysis, Supreme Court and appellate court precedent holds that the First Amendment does not establish a public right of access to government information or sources of information, even when the denial of the request for access operates to prevent certain information from entering the public stream of knowledge. Consequently, we can discern no basis for plaintiffs' assertion that they have a First Amendment right to study human remains in the custody of the United States.

If you have any further questions or need additional information, please do not hesitate to contact me.

Sincerely,

Jack Haugrud
Chief

ATTACHMENT 9
ENCLOSURE 1

Plaintiffs assert that the First Amendment provides them with the right to study the Native American human remains discovered on federal land near Kennewick, Washington and currently in the custody of the United States Army Corps of Engineers[1] pending a determination of the appropriate owner under the Native American Graves and Repatriation Act (NAGPRA), 25 U.S.C. §§ 3001-3013. No such First Amendment right exists. The First Amendment prevents the government from interfering with a person's attempt to speak or publish, Nebraska Press Ass'n v. Stuart, 427 U.S. 539 (1976), protects the right to hear or read information being communicated, Pell v. Procunier, 417 U.S. 817, 832 (1974), and prohibits the government from closing certain governmental proceedings historically open to the public, Press Enterprise Co. v. Superior Court of California, 464 U.S. 501 (1984). The First Amendment does not, however, impose an affirmative duty on the government to disclose all information or sources of information within its possession to the public.[2]

The Supreme Court has rejected the argument that the long-recognized First Amendment rights to gather news and receive information imply a right of access to government-controlled

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[1] Section 3 of NAGPRA sets forth the ownership or control of Native American remains inadvertently discovered on federal lands after 1990. 25 U.S.C. § 3002. Section 3, in setting forth a process for determining the ownership and disposition of newly discovered human remains, presumes that these items have not been acquired or possessed as government property. See Section 7 of NAGPRA, 25 U.S.C. § 3005 (setting forth procedures for repatriating Native American human remains and objects possessed or controlled by Federal agencies and museums). Accordingly, the federal agency with jurisdiction over the lands where the remains were inadvertently discovered retains temporary custody of the remains while the appropriate ownership and disposition of the remains is determined in accordance with NAGPRA but the remains are not government property during this period.

[2] The First Amendment reads, "Congress shall make no law . . .abridging the freedom of speech, or of the press . . . ." U.S. Const. Amend I.

sources of information. Houchins v. KQED, Inc., 438 U.S. 1 (1978). The plurality opinion in Houchins stated that the "Court has never intimated a First Amendment guarantee of a right of access to all sources of information within government control," 438 U.S. at 9, and that the "undoubted right to gather news ... affords no basis for the claim that the First Amendment compels others–private persons or governments–to supply information." 438 U.S. at 11.[3/]

Houchins followed precedent that similarly held that the First Amendment does not guarantee the right to gather all information. See, e.g., Zemel v. Rusk, 381 U.S. 1, 16-17 (1965) (sustaining the Government's refusal to validate passports to Cuba even though that restriction "render(ed) less than wholly free the flow of information concerning that country" as the "right to speak and publish does not carry with it the unrestrained right to gather information"); Branzburg v. Hayes, 408 U.S. 665, 684 (1972) (In case raising question of whether a reporter can be required to testify before a grand jury, the Supreme Court noted that, "[i]t has been generally held that the First Amendment does not guarantee the press a constitutional right of special access to information not available to the public generally."); Pell v. Procunier, 417 U.S. 817 (1974) (First Amendment does not give newspaper reporters a right to interview any inmate in California prison that they wish); Saxbe v. Washington Post, 417 U.S. 843 (1974) (Constitution does not require that the Federal Bureau of Prisons give newspaper reporters

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[3/] Chief Justice Burger wrote the opinion of the Court in Houchins, joined by Justices White and Rehnquist. Two justices did not participate in the decision, and Justice Stewart agreed that "[t]he first and fourteenth amendments do not guarantee the public a right of access to information generated or controlled by the government, nor do they guarantee the press any basic right of access superior to that of the public generally." Id. 438 U.S. at 16, (Stewart, J., concurring). Thus, a majority of justices rejected the claim of a constitutional right of access to government information.

access to interview individual inmates); see also Justice Stewart, "Or of the Press," 26 Hastings L.J. 631, 636 (1975) ("There is no constitutional right to have access to particular government information, or to require openness from the bureaucracy.").

Subsequent Circuit decisions have followed the Houchins reasoning and held that the First Amendment does not imply a right of access to government-held information. See e.g., Lanphere & Urbaniak v. Colorado, 21 F.3d 1508 (10th Cir. 1994) (finding no First Amendment right of access to criminal justice records); Calder v. Internal Revenue Service, 890 F.2d 781 (5th Cir. 1989) (finding that "the right to speak and publish does not carry with it an unrestricted license to gather information"); Capital Cities Media v. Chester, 797 F.2d 1164, 1168-71 (3d Cir.1986) (holding that a government agency could deny a newspaper access to government records despite the apparent effect the denial might have on the newspaper's exercise of its First Amendment rights); Gregg v. Barrett, 771 F.2d 539 (D.C. Cir. 1985) (holding that there is no First Amendment right to receive verbatim transcripts of congressional proceedings).[4/]

The Supreme Court cases cited by the District Court do not imply the existence of a First Amendment right of access to government-held information. Bonnichsen v. U.S. Army Corps of Engineers, 969 F.Supp. 628, 646-47 (D. Or. 1997). These Supreme Court cases describe neither a general right of access to government-held information nor a right of access to the

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[4/] It is important to note the government does not challenge the proposition discussed by the District Court and supported by the cases cited in footnote 15 of the court's opinion that the right to receive information is a "necessary corollary to the right to free speech." Gotkin v. Miller, 379 F. Supp. 859, 862-3 (E.D.N.Y. 1974). Plaintiffs' argument here, however, does not assert that the government stands between a "willing speaker" and his audience; instead, plaintiffs seek to compel the government to be an "unwilling speaker" by forcing disclosure of a source of information held by the government.

Kennewick remains.

First, in Griswold v. Connecticut, 381 U.S. 479 (1965), the Court stated that "the State may not, consistent with the spirit of the First Amendment, contract the spectrum of available knowledge." Id. at 482. In Griswold the Court considered a Connecticut law forbidding the use of birth control and found that the law unconstitutionally intruded upon the right of marital privacy. The Court did not address whether a government could limit access to government-held information or property; rather, the Court considered whether a government could abridge an individual's right to use publicly available products. The Court's statement regarding contracting the spectrum of available knowledge was made in the context of a state affirmatively limiting the available educational opportunities and cannot be construed as suggesting that the public has a First Amendment right to information or property in the control of the government. The Court confirmed this conclusion in its subsequent decision in Houchins, which explicitly rejected a First Amendment right of access to all sources of information within government control.

In First National Bank of Boston v. Bellotti, 435 U.S. 765 (1978), the Court considered a constitutional challenge to a criminal statute that prohibited business corporations from making contributions or expenditures to influence the outcome of a vote on any question submitted to voters other than questions materially affecting the property, business or assets of the corporation. In its analysis, the Court noted that its recent commercial speech cases "illustrate that the First Amendment goes beyond protection of the press and the self-expression of individuals to prohibit government from limiting the stock of information from which members of the public may draw." Id. at 783 (internal cites omitted). As in Griswold, the Court's

comments that a government may not limit available information were made in the context of abridging the communication between a willing speaker and a willing audience and not in the context of a government limiting access to government-held information or property.

Finally, the Supreme Court has held, in a plurality opinion, that the right to attend criminal trials is implicit in the First Amendment. Richmond Newspapers, Inc. v. Virginia, 448 U.S. 555 (1980). Richmond and the related cases of Press-Enterprise Co. v. Superior Court, 478 U.S. 1 (1986) (Press-Enterprise II), Press-Enterprise Co. v. Superior Court, 464 U.S. 501 (1984) (Press-Enterprise I), and Globe Newspaper Co. v. Superior Court, 457 U.S. 596 (1982), do not establish a general First Amendment right to access government-held information. This line of cases simply recognizes the long tradition of public access to criminal trials and the significant role that access plays in the functioning of the judicial process. As noted by the Third Circuit, "[t]hese cases hold no more than that the government may not close government proceedings which historically have been open unless public access contributes nothing of significant value to that process or unless there is a compelling state interest in closure and a carefully tailored resolution of the conflict between that interest and First Amendment concerns." Capital Cities Media, 797 F.2d at 1173. Justice O'Connor has similarly indicated that she does not interpret Richmond Newspapers or Globe "to carry any implications outside the context of criminal trials." Globe, 457 U.S. at 611. In fact, in the twenty years following its decision in Richmond Newspapers, the Supreme Court has not applied the analysis used in Richmond Newspapers to areas other than criminal proceedings.

The cases cited by the District Court do not stand for the proposition that the First Amendment provides a general right of access to information held by the government. Nor do

this cases provide any basis for implying a First Amendment right to the specific source of information at issue in this case. Instead, the cases simply reiterate the indisputable First Amendment principles that a government, absent compelling justification, may not interfere with the right of a willing speaker to speak, or a willing listener to listen, and that the weight of historical practice and the value of public access demands continued access to criminal trials absent a compelling reason for exclusion.[5]

While the government is not under a constitutional duty to provide access to information held by the government, Congress may appropriately impose such duties by statute. See Houchins, 438 U.S. at 12 (access to government-held information "is clearly a legislative task which the Constitution has left to the political processes."); Id. at 16 (Justice Stewart concurring in the judgment) ("The Constitution does no more than assure the public and the press equal access once government has opened its doors . . . Forces and factors other than the Constitution must determine what government-held data are to be made available to the public."); Capital Cities Media, 797 F.2d at 1173 ("[D]ecisions as to how much governmental information must be disclosed in order to make democracy work historically have been regarded as political decisions to be made by the people and their elected representatives."); see also Justice Stewart, "Or of the Press," 26 Hastings L.J. 631, 636 (1975) (stating that while there is no constitutional

[5] It is important to note that even if there were a First Amendment right of access to government-held information, a request to study the Kennewick remains could legitimately be denied under the First Amendment's "compelling state interest, least restrictive means" analysis. As documented in the many conservators' reports in this case, the Kennewick remains are extraordinarily fragile and any physical handling of the remains results in damage to the remains. The government has a compelling interest in preserving the Kennewick remains pending determination of their rightful owner and precluding the destructive studying of the remains is the least restrictive means to ensure preservation of the remains.

right to access government information, "Congress may provide a resolution, at least in some instances, through carefully drawn legislation."). Decisions regarding what information must be disclosed to the public are left to the legislature, in part, because legislatures are best positioned to weigh the various competing interests in the disclosure of particular information. For example, "Congress fashioned its Freedom of Information Act list of exclusions over a ten-year period. It relied on the interaction of countless political forces and needed no principled basis for fashioning those exclusions." Capital Cities Media, 797 F.2d at 1172-73.

Congress has extensively legislated in the area of mandatory government disclosure of information. See e.g. Freedom of Information Act, 5 U.S.C. § 552, the Federal Advisory Committee Act, 5 U.S.C. App. §§ 1-14, and the Government in the Sunshine Act, 5 U.S.C. § 552b. Congress has even specifically defined the contours of the public's access to Native American remains. Under the Antiquities Act of 1906, see 16 U.S.C. §§ 431-433, and the Archaeological Resources Protection Act, 16 U.S.C. § 470aa, access to study qualifying Native American human remains that are in the possession or control of the United States is provided through a permit system.[6/] Congress, after a careful consideration and weighing of competing interests, has defined the public's access to government-held information and property, including

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[6/] The statutes regulating access to Native American remains have been upheld by the Courts. See e.g. In Re The Exhumation of Meriwether Lewis, 999 F. Supp. 1066 (M.D. Tenn. 1998) (Professor of forensic science and District Attorney General sought permission to exhume Captain Meriwether Lewis' body which was interred on federal land. The Court, noting that the exhumation of the body of Captain Lewis would serve a purely academic and historical goal, held that "ARPA is simply the only remedy through which the State or anyone else can seek the exhumation of the body of Captain Lewis."); United States v. Austin, 902 F.2d 743 (9th Cir. 1990) (holding that ARPA is not unconstitutionally overbroad because it limits access to Native American grave sites).

Native American remains.

Substantial Supreme Court and appellate court precedent clearly holds that the First Amendment does not establish a public right of access to government information or sources of information, even where the denial of the request for access operates to prevent certain information from entering the public stream of knowledge. While the First Amendment prevents the government, absent a compelling justification, from preventing a person from being a speaker (or a listener) where he or she is willing, the First Amendment does not compel the government to be a "speaker"–by providing access to information or sources of information–where it is unwilling. Accordingly, the plaintiffs have no right under the First Amendment or under statute to study the Kennewick remains.